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STATE OF COLORADO

BUREAU OF MINES

State Capitol, Denver

JOHN T. JOYCE, *Commissioner of Mines*

ANNUAL REPORT

for the Year 1932

[redacted]

Bradford-Robinson Printing Co.
Denver, Colorado
1933

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LETTER OF TRANSMITTAL

To His Excellency,

THE HONORABLE ED C. JOHNSON,
Governor of Colorado.

Sir: In compliance with Section 3392 of the Compiled Laws of Colorado, 1921, I have the honor to transmit herewith the Annual Report of the State Bureau of Mines for the year 1932.

Respectfully submitted,

JOHN T. JOYCE,
Commissioner of Mines.

State Capitol,
Denver, Colorado,
June 1, 1933.

PERSONNEL OF THE BUREAU OF MINES OF THE STATE OF COLORADO

JOHN T. JOYCE, Commissioner of Mines	Denver
GEORGE BECKER, Inspector, District No. 1	Denver
HERRICK McLEOD, Inspector, District No. 2	Colorado Springs
R. J. MURRAY, Inspector, District No. 3	Salida
J. F. CLOUGHER, Inspector, District No. 4	Silverton
W. H. WILLIAMS, Chief Clerk	Denver
MRS. A. M. NICKERSON, Stenographer and Assistant Clerk	Denver

DISTRICTS OF INSPECTION

DISTRICT No. 1—[a]Adams, Arapahoe, Boulder, Clear Creek, Denver, Gilpin, Grand, Jackson, Jefferson, Larimer, Logan, Moffat, Morgan, Phillips, Routt, Sedgwick, Washington, Weld and Yuma counties.

DISTRICT No. 2—[b]Baca, Bent, Cheyenne, Crowley, Custer, Douglas, Elbert, El Paso, Fremont, Huerfano, Kiowa, Kit Carson, Las Animas, Lincoln, Otero, Prowers, Pueblo and Teller counties.

DISTRICT No. 3—[c]Chaffee, Delta, Eagle, Garfield, Lake, Mesa, Park, Pitkin, Rio Blanco and Summit counties.

DISTRICT No. 4—[d]Alamosa, Archuleta, Conejos, Costilla, Dolores, Gunnison, Hinsdale, La Plata, Mineral, Montezuma, Montrose, Ouray, Rio Grande, Saguache, San Juan and San Miguel counties.

On August 2nd, 1928, all former Departmental orders of temporary transfers from one district to another were vacated and in lieu thereof the following temporary changes in the different districts were made by order of the Commissioner of Mines, to-wit:

[a] All of the county of Summit and that part of Park County lying north and west of a line drawn from the southwest corner of Jefferson County to the southwest corner of Park County were temporarily transferred from District No. 3 to District No. 1.

[b] That part of said Park County lying south and east of said line was temporarily transferred from District No. 3 to District No. 2.

[c] That part of Gunnison County in the extreme northwest corner and lying north of the 39th degree of latitude, that part of Saguache County lying south and east of the Continental Divide and all of the counties of Mineral, Rio Grande, Conejos, Alamosa and Costilla were temporarily transferred from District No. 4 to District No. 3.

[d] All of the counties of Mesa and Delta were temporarily transferred from District No. 3 to District No. 4.

The remainder of all said districts to be left intact as now established by law until further changes are made by order of the Commissioner of Mines, or by the legislature of the State of Colorado.

INTRODUCTION

The activities of the Bureau of Mines during 1932 were confined to the usual routine, no funds for any special work being provided.

The four inspectors visited practically all of the operating metal mines, quarries, mills, smelters and railroad tunnels at least once during the year. Most of the larger operations were inspected more than once. The object of these inspections is to eliminate, as far as possible, unsafe conditions and practices in the operation of such properties. In general, this work meets with the lively cooperation of the operators.

The Commissioner and Inspectors are anxious to help the mining industry in every legitimate manner and wish to be called upon whenever their services can be used.

Inquiries regarding the mines and mineral resources of the state and questions regarding the demand and market for less common mineral products are constantly coming into the Bureau. An earnest endeavor is made to furnish the information desired. Helpful cooperation is often received from the Colorado Geological Survey, the United States Bureau of Mines and the United States Geological Survey.

The Commissioner takes this opportunity of expressing his appreciation of the loyal and efficient services that have been rendered by the entire personnel of the Bureau during the past year.

METAL MINING IN COLORADO, 1932

By John T. Joyce

(State Commissioner of Mines)

The total output from the nonferrous metallic mines of Colorado for 1932 was as follows: Gold, $6,661,271; silver, $496,052; copper, $441,091; lead, $115,220 and zinc, $7,781. A total of $7,721,415. A decline of only $220,739 from the total production of 1931.

In all, it is a remarkable showing and reveals a corresponding remarkable condition of affairs in the metal mining industry in our state.

While the decrease in the total production of silver and the base metals was $2,059,276 it was nearly offset by an increase in gold production of $1,838,537.

The decrease in silver and the base metals is due entirely to the lowest market price in the world's history. This can be readily understood when comparisons are made with productions for 1928, the year preceding the panic. Average price of silver in that year was 58½ cents an ounce, copper 14 cents, lead 5.5 cents and zinc 6.1 cents a pound, respectively.

In that year, the total production of silver and base metals from the mines of Colorado was $11,070,479 compared to a little over $1,000,000 produced in 1932.

Obviously the comparison reveals how severely price declines have affected the great mining industry of the western fields, including Colorado, which justly and proudly boasts of its extensive mineral resources and fields in which may be found some of the largest established zinc and lead mines in the world at Gilman, Silverton, Leadville, Rico and in other districts of equal promise, awaiting development in various other sections of the state.

On the other hand, how cheering it is to note the heavy increase in gold production over the preceding years since 1928.

Counties showing an increase of over $10,000 in gold are as follows: Park County leads with an increase in gold production of $1,869,234; Lake next with an increase of $53,360; Boulder, $52,061; Clear Creek, $46,594; Ouray, $40,445; La Plata, $18,711; and Summit County with a gain of $9,949. The only counties that showed a decrease of over $10,000 in the production of gold are namely: San Juan and Teller counties both of which under normal conditions would be among the leading counties of the state. Gilpin County produced in 1932 $342,719 in gold, principally from the Chain O'Mines. This was an increase of nearly $5,000 over the preceding year. It would be a reasonable assumption that if it had not been for the abatement of operation during part of the past year by the Chain O'Mines that the increase of Gilpin County would have been largely in excess of $10,000.

For many years prior to 1916, Colorado held first place in gold production. Then California took the lead by extensive development of her promising gold prospects.

During the first eight years of the past decade, from 1921 to 1928 the year preceding the beginning of our present economic depression, we led Alaska in gold and ranked as second among the gold-producing states. Were it not for the temporary suspension of our base metal mines, owing to the unprecedented low market prices, we still would occupy that envied position.

For instance the Sunnyside Mine in San Juan County, down since 1929, with 20 years' known ore established when operating at usual capacity of 1,000 tons daily, produced over an average of 10,000 ounces of gold annually—$200,000 taken from our annual production by the suspension of one mine. The same is true of Leadville and the other great mining districts of our state.

In our 25,000 square miles of highly mineralized territory, there are scores of known gold districts which are most promising and inviting for both lode and placer operations.

This should be amply sufficient to convince the most skeptical that Colorado is essentially a gold-producing state.

Within a few hours' drive from Denver are several porphyry gold deposits that pan gold freely, but they need further testing before extensive development and in all cases competency, experience and economical management is absolutely necessary.

Since the price of gold, to serve the purposes of the gold standard, was not affected by the depression it is only natural that those who suffered in other industries and securities should turn to the mining industry for recovery.

For the past two years or so placer mining has attracted a great deal of attention throughout the western fields. In the earlier days when the fields were new the "Old Timer" with his pick, shovel, pan, sluice and rocker often made fortunes from small patches of ground which was rich in gold content measured by the cubic yard. But that field quite extensive in those days is now very limited if not nearly exhausted and that which remains requires careful and energetic prospecting and testing on the ground itself instead of through the columns of the press, unverified prospectuses or other means of promulgation.

Placer mining may be operated in more devious ways both great and small than any other branch of the mining industry, ranging from the common sluice box to the mighty dredge. In order to be successful the operator must have a thorough knowledge of his ground not only as to the surface depth but also the character thereof as to detrimental clays, the size of its boulders, the character of its bedrock as well as its value per cubic yard. With this knowledge a good placer operator can easily figure the cost of production against the possible recovery.

Present day placer mining, on the larger scales, resolves itself into several phases. Gravel that could not be touched years ago can now be mined profitably. The problem therefore for the operator is to have a sufficient yardage with average values per yard that will warrant the expenditure that will be required. In order to determine this careful and accurate testing is absolutely necessary as stated above.

The next problem is to determine the machinery best adapted for the operation of each particular piece of ground in order to recover the greatest ratio of its values at the lowest possible cost.

To illustrate: by following this system the Yuba Consolidated Gold Field, California, in 1928-29, dredged 24,948,295 cubic yards of gravel the average yield was 8.81 cents per cubic yard, the cost of operation was 4.53 cents per cubic yard and the net profit was $1,066,124. (See Report State Minerologist, Calif., 1931.)

It is common knowledge that there are multifold thousands of acres of promising placer ground in the mining districts of Colorado which offer fruitful fields for capital seeking investments in the mining industry of Colorado.

For the past eight years this department has been calling attention to this field, many have given it considerable thought, but within that period only the Humphrey Brothers of Denver, men of foresight and vision, had the confidence and courage to take the initiative.

After an expenditure of approximately $40,000 for investigation of various placer fields both in Colorado and outside the state, they decided that gravel found in the bed of Clear Creek, Colorado, could be profitably placer mined if operated on a large scale. Accordingly they invented a suction dredge capable of handling 2,000 cubic yards per day of 24 hours at a cost of not more than 15 cents per cubic yard.

This dredge is a creature of the inventive genius of I. B. Humphreys and its operation thus far indicates a brilliant success. I regret that lack of space prevents giving a full description of this machine. The same may be found on page 43 in the Mining Year Book, 1933, published by the Colorado Mining Association.

According to a recent address of Dr. T. S. Lovering, metalliferous geologist, a member of the United States Geological Survey now being made of Colorado, there are at least three practically heretofore unknown locations that may be big mining producing areas in the future.

The following extract from his address is a fitting conclusion for this article:

"Other formations similar to these are indicative of like mineral wealth. Without the new discoveries made by the Survey, such formations could not have been located, for there is little at the surface to indicate to the ordinary prospector that rich ore may exist beneath."

CONDENSED REVIEW OF MINING DISTRICTS BY THE FIELD INSPECTORS FOR 1932

DISTRICT No. 1, by George Becker

The mining activity in this district continues in its encouraging trend. During the year 1932 there were sixty new enterprises added to the 1931 list, several of these new enterprises that are being operated or planned are of a substantial sort. Most of these have sufficient financial backing to carry on operations in low grade ore, which requires a large investment in machinery and equipment for extracting the precious metals. The mountains of this region, however, still abound in undiscovered veins of gold and silver, large and small, and occasionally operators of supposedly low grade sites encounter exceedingly rich ore.

During the summer of 1932, about 1000 men were estimated to be engaged in placer mining in this district, some using picks and shovels with gold pans, others using different makes and kinds of devices to separate the gold from the gravel. The results from this work were encouraging; it proved that there are still large areas containing placer gold in commercial values, but only for those who have sufficient financial backing to install machinery and equipment that will handle a large tonnage or yardage could these areas be worked at a profit. These areas also have an ample supply of water for any equipment that might be desired. The placer mining that has been done and is being carried on has demonstrated that the veins or lodes that are the source of this placer gold are still hidden, which still leaves a large virgin territory for the prospector to work on. The Humphreys Gold Corporation is operating a new device invented by them, which they call a suction dredge; this is being operated successfully in the canon west of Golden. This suction dredge appeals to me very much for placer mining on a large scale.

There has been a noticeable increase in the production of gold throughout the district for the last three years, especially in the Alma district, which was mostly due to new development and deep mining. In 1931 the output of the Alma district totaled close to the output from the Cripple Creek district, and in 1932 even the Cripple Creek authorities, such as officials of the Golden Cycle mill, admit that Alma will surpass the famous gold camp, by about $300,000 in the production of gold. There are now four shipping mines and several approaching the shipping stage. There is reason to believe that the present system of development work planned and being carried out along the London fault should result in finding big ore bodies, perhaps better than have been found in the London mine.

Due to the continued low price of silver, lead, zinc, copper and tungsten, the mines where the value of these metals predominated were forced to suspend operations and will continue idle until there is a favorable market. Only the mines where gold values predominated were able to operate at a profit.

Reports from prospectors in the field are encouraging, many having discovered new ore bodies in new fields carrying gold values. There has been a noticeable increase in the number of new locations made throughout the district during the year.

Judging from the numerous inquiries for metal mines, and the new organizations under way, and those that are just getting started, it would seem that the coming year will show a still greater increase in production and employment.

ORE REDUCTION MILLS

New mills constructed and operated in 1932, comprised the erection of a 100-ton daily capacity mill, with wet concentration and flotation process, on the London property near Alma. The erection of a 50-ton daily capacity mill, with wet concentration and amalgamation process on the McDowell property near Breckenridge. The erection of a 100-ton daily capacity mill, with wet concentration and amalgamation process, on the Dukin mine near Breckenridge. There were a number of small five-stamp mills, with wet concentration and amalgamation process, erected in different parts of the district.

The older mills that were remodeled and operated, are the Paris mill, with wet concentration, flotation and amalgamation process on the Paris mine property near Alma. The North London mill, with wet concentration and flotation process, with a 100-ton daily capacity, on the North London near Alma. The Polar Star mill, with wet concentration and amalgamation, with a 50-ton daily capacity, operated as a custom mill near Blackhawk. The Dump mill, with wet concentration, flotation and amalgamation process with a 50-ton daily capacity, on the War Dance property near Central City. The Chain O'Mines mill, with wet concentration, flotation and amalgamation process, with a 1000-ton daily capacity, on the Chain O'Mines property near Central City. The Mattie mill, with wet concentration, flotation and amalgamation process with a 75-ton daily capacity on the Mattie mine near Idaho Springs. The Lincoln mill, with wet concentration and flotation process, with a 50-ton daily capacity, on the Lincoln mine property near Idaho Springs. The Mammoth mill, with wet concentration, flotation and amalgamation process, with a 50-ton daily capacity, operated on ore from the Pulaski mine near Silver Plume. The Black Swan mill, with wet concentration, flotation and amalgamation process, with a 75-ton daily capacity, this mill is operated on custom ore, and is located on Four Mile Creek west of Boulder. There are a number of mills idle throughout the district due to the low price of base metals.

NONMETALLIC INDUSTRY

There are 1000 or more men employed at the different plants in Denver where they manufacture a product from clay which is produced from the clay mines near Denver. The manufactured product is shipped all over the world. The nonmetallic branch of the mining industry is increasing. The State Mine Inspectors have as much work in looking after the safety conditions in clay mines and plants as they have in many of the metal mines.

DISTRICT No. 2, by Herrick McLeod

Custer County—The great silver-lead mines of Custer County were idle during the year 1932, on account of the low price of those metals.

Considerable prospecting for gold values was done in the neighborhood of Querida. John B. Henderson, of Pueblo, has found gold-bearing ore, by new work near surface, on the Bassick property, one hundred and fifty feet east of the old Bassick shaft.

The Cloverdale Mines Company reconstructed the mill buildings at the Cloverdale mine, and had part of the machinery installed when cold weather stopped work. It is planned to have mine and mill in operation next summer.

Douglas County—Fire clay, silica, plastic clay, and limestone were produced in this county in 1932.

El Paso County—Two limestone quarries, one lime kiln plant, a sandstone quarry, and the ore reduction plant of the Golden Cycle Corporation, known as the Golden Cycle Mill, were in operation in this county.

The Golden Cycle mill treats all the ore produced in the Cripple Creek mining district, and a large tonnage from other parts of the state. A total of 338,762 tons was treated in 1932. The plant provided steady employment for 165 men. It is a complete and up-to-date plant, and is a convenient market for Cripple Creek ores, with low freight and treatment rates.

A large production of limestone was made in 1932 for the use of the Golden Cycle mill, and for the Holly Sugar plant at Swink.

Fremont County—There are vast stores of wealth, in the form of non-metallic products, in Fremont and neighboring counties. There are mountains of travertine, building and monumental granite, dolomite and limestone, immense bodies of high grade feldspar, large deposits of vermiculite, biotite and muscovite, marble, sandstone, silica, fire clay and some beryl.

A large and steady production of feldspar was made in 1932 from quarries in Eight Mile Park. The product was shipped to The Western Feldspar Milling Company's plant in Denver. An increased production of limestone was made from quarries at Wellsville and Calcite. The product was shipped to the American Sugar Company's plant at Rocky Ford, and to the Leadville smelter.

A large part of the granite from the Rose Pink Granite quarry on Texas Creek, which is owned by The Salida Granite Corporation, is shipped to Massachusetts.

The Colorado Travertine Company shipped several cars of travertine from its quarry at Wellsville. Travertine from this quarry was used in the new Telephone Building in Denver.

An increased demand for vermiculite and other mica products is indicated by recent inquiries from eastern states about the possibility of securing large tonnages of these products in Colorado. Shipments of vermiculite are now being made from the Oak Creek section to Springfield, Illinois. Large deposits are known to exist in Chaffee, Custer, Fremont and Pueblo counties.

The fire clay mines and brick manufacturing plants of The Diamond Fire Brick Company, and The Jewett Fire Brick Company were in operation part of the year.

The Colorado Portland Cement Company's plant was in operation the greater part of the year, and produced 2,500 barrels of cement daily.

The Empire Zinc Company's zinc oxide plant was in operation about four months in 1932.

Huerfano County—The Standard Fire Brick Company, of Pueblo, owns and operates a fire clay mine and a silica sandstone quarry near Vulcan.

Las Animas County—The Trinidad Brick and Tile Company owns and operates a shale pit and brick plant near Trinidad. The brick plant was in operation part time. It has a capacity of 20,000 bricks per day.

Otero County—The La Junta Clay Products Inc. owns and operates a shale pit and brick plant in La Junta. The plant operated part time. It has a capacity of 20,000 bricks per day.

Pueblo County—Pueblo County has one limestone quarry, one sandstone quarry, six clay mines, and clay kiln plant, one clay grinding plant, two brick plants, and one mica grinding plant.

The Standard Fire Brick Company's plant has a capacity of 60,000 bricks per day. The Summit Pressed Brick and Tile Company's plant has a capacity of 20,000 bricks per day. Both plants operated part time in 1932.

Pueblo Quarries Incorporated owns and operates a large sandstone quarry and stone dressing plant at Stone City. Three carloads of fabricated building stone were shipped from this quarry in 1932, to Ottawa, Kansas. It was used in building an addition to the U. S. Post Office in that city. Stone from this quarry was used in the original building. The stone is of fine quality. The equipment of quarry and plant is complete, and the material can be furnished in any quantity at very low cost.

Teller County—The Cripple Creek District mines produced 312,953 tons of ore in the year 1932, with a total gross value of $2,348,915. The prospect is bright for a greater production in 1933.

The Cresson mine has more ore in sight than at any time in the last three years. The ground above the tenth level is leased in blocks on the split check system. There are thirty-two sets of leasers, and all are working in ore. The company is breaking a large tonnage of ore on the lower levels, and has eight machines going steadily on development. Shipments for the year amounted to 77,100 tons, with a gross value of $776,197.

The United Gold Mines Company group, which includes the Vindicator, Golden Cycle, Rose Nicol, King Solomon, and others, produced 63,534 tons of ore, with a gross value of $492,801.35. Development work in the group amounted to 14,000 feet for the year.

The Cresson and the United Gold Mines provided steady work for 441 men.

The Portland produced about 20,000 tons during the year.

The Ajax produced a large tonnage of better than average grade.

The Stratton Cripple Creek M. and D. Co. reports an increased tonnage, and a better grade of ore for the past year. One of its mines, the Logan, has been reconditioned recently, for operation, after a shutdown of over twenty years. The American Eagles has been leased to a strong company, and will be in operation soon.

The Pinnacle, Jerry Johnson, Isabella, Strong, Le Clair, Block 8, Midget, and Cameron Townsite mines made production in 1932.

During the past year many old properties have been retimbered and equipped for new operation. The list includes the South Burns, Wild Horse, North Star, Katinka, Gold Bond, Index and Commonwealth. The Katinka had been idle for fifteen years. It has a production record of $400,000. All of these mines have been producers in the past. There are many other mines in the district, which have lain idle for years, from which fortunes were taken, when mining, freight and treatment costs were much higher than at present.

The Cripple Creek mining district is the home of a number of experienced mining men, who have lived and worked in the district for years, who have studied the geology and vein systems, know the history of the mines, and have faith in the district.

Benjamin F. Hill is getting a rich reward for well-directed work in the lower levels of the Ajax. Al Osberg is in charge of a profitable operation of the Jerry Johnson. Leon F. LeBrun, Evan J. Williams and William A. Kyner have rendered conspicuous service to the district by securing outside capital to finance operations on good properties. James S. Ricketts, Harry Woodward, E. A. Vuichoud, Wellington C. Symons and Fonzo S. Chillson are doing good work in putting old mines in shape for profitable operation. The Strong, Pinnacle and Cameron Townsite, under direction of Andrew Vigen, Roland Wilson and Elmer Reinhardt, respectively, will continue producing in 1933. The superintendents of the large producers, Alfred Bebee, Henry Christensen, Clayton Kissell, Joseph S. Anderson and William F. Peterie have all lived and worked in the district for many years.

DISTRICT No. 3, by R. J. Murray

Some of the low grade sulphide mines in this district have curtailed production, and in many instances others closed down entirely, owing to the all-time low prices on many of our metals. The stability of gold and its ores have diverted the attention of mining men to other fields where gold predominates, and to temporarily, at least, abandon the low grade mines where separation and recovery of metals are necessary.

I believe that my reports for the past year will bear me out in saying that there have been more prospectors in the field than in any previous year. More small operations have started in gold-bearing sections than there have been for a number of years past. The prospectors are usually working in groups of two or more men, and in many cases are being financed by others than themselves. Many hundreds of men are placering in different sections and have increased the production of gold in our state. In several instances what may in the future be new gold fields have, during the past summer, been opened up by the prospector. Further development in some of these places will, I know, bear watching during the coming year. Other prospectors are confining their efforts to minerals and are seeking to discover beryllium, molybdenum, vanadium and other minerals known to exist in this state.

Chaffee County—Mining in the Granite district has been fairly active during the year, and small tonnages of gold-bearing ore have been shipped from this district. Placer mining reached its peak in this county during the year, while the granite quarries produced a very fair amount of stone.

Conejos and Costilla Counties—These counties have had their quota of placer miners and prospectors out in the hills, and I understand a few gold discoveries have been made during the late fall.

Eagle County—Several new enterprises have started in this county during the past year, particularly around Battle Mountain, Redcliff and vicinity, some of which are producing small tonnages of very high grade gold ore. These, together with the sulphides being shipped, make the outlook for this county very encouraging for the coming year.

Garfield County—A find of silicate of zinc in this county may, with further development, open up a new field for this and other metals. Some new operations in the vanadium field were carried on in this county during the year.

Gunnison County—The marble quarries in this county have operated during the past year with a small quota of men as compared to former years. Many prospectors are working in the vicinity of Crystal and Marble.

Lake County—Many are placering in the different gulches, some of which are fairly well equipped to separate and handle yardage. A new company has recently entered this field and is preparing to carry on a large campaign of underground development and prospect work in one of the most highly mineralized sections in the Leadville district, while another company has started work along the Ball Mountain and other faults, all of which have been practically untouched and are supposedly in one of the richest gold-bearing sections in the Leadville gold belt. A marked increase in the production of molybdenum has taken place within the past month in Lake County.

Mineral County—The slump in silver, a metal for which this county is noted, caused the closing down of practically all the mines in Creede. A considerable tonnage of bentonite has been shipped during the past year.

Pitkin County—What is said to be a true fissure vein, carrying high gold and copper values, has been opened up about three miles west of the Carlton tunnel. A company has been incorporated, and work will be pushed on this property in the early spring. Numbers of prospectors have been working in the Red Mountain, Porphyry Mountain and Coal Creek sections and have made some finds during the late fall. One of Aspen's mines is producing a small tonnage of silver-lead ores.

Rio Grande County—A number of prospectors have been working during the summer in Summitville, Platoro and Stunner, while considerable new development and prospect work has been carried on at Jasper with fruitful results.

Saguache County—A good showing of gold ores has been discovered on South Beaver Creek in this county.

In conclusion, let me add that the outlook for mining, especially in the districts where gold has been found during the past year, bespeaks a new future for gold mining and production for 1933.

DISTRICT No. 4, by J. F. Clougher

Notwithstanding the suspension of operations on several of the formerly big tonnage producers of lead, zinc and silver in this section, such diminution of activities this year has been quite favorably offset by numerous instances of intensified exploratory work on mining properties having evidences of gold values, in different counties embraced by this district.

Archuleta County—Activities during the present year consisted of prospecting gold-bearing veins, and minor scale developments on groups of mining claims by the owners thereof.

Dolores County—Operations during 1932 were conducted on five different mining properties, with major scale development on the Rico-Wellington mine, the ore reserves of which mine can be computed in hundreds of thousands of tons. A program of further exploration and development of this property is scheduled for 1933.

Gunnison County—Eleven different mining properties have been in active operation during the present year. Besides such major activities there has been several small scale operations by individual owners of claims, and by prospectors in different parts of this county.

Hinsdale County—Activities during this year consisted of extensions of underground workings on two lead-zinc-silver mines, two gold mines, leasing operations on two gold properties, and development work on a limited scale on groups of claims owned by individuals.

La Plata County—Twelve different mining properties have been in active operation during 1932, besides several small scale operations by owners of claims at different points in this expansive gold-bearing area. Plans are at present being made for the opening up of some additional properties in 1933.

Montezuma County—Operations on a limited scale were conducted near the head of the West Mancos river, and at the head of the East Mancos river, during the summer months of this year.

Montrose County—Interest in mining during the greater part of this year was prospecting for deposits of vanadium ores in the vast carnotite fields within the confines of this county.

Ouray County—Fifteen mining properties have been in active operation at different points in this county during the present year, besides four cleanup operations on mill tailings dumps. Milling operations were conducted by the Camp Bird Lease, Inc., at the Camp Bird mine, and by the Banner American Mining Company.

Saguache County—In the northwestern part of this county (embraced by the 4th district) two different mining properties were under operations this year. Activity on one of them was underground development and exploration, and on the other there was development and ore production.

San Juan County—Active operations were conducted on twelve different mines, and there were minor scale developments on six different groups of mining claims by individual owners and prospectors. The Shenandoah-Dives mine has been maintaining a production of 600 tons of crude ore daily during the latter part of this year.

San Miguel County—Operations in this county during 1932 include activities on eight lode mines and several placer projects in the Telluride, Ophir and Placerville localities, and limited operation and ore shipment on and from a vanadium property situated in the vicinity of Egnar, in the southwestern part of this county.

New Mill Construction and Mine Improvements made in District No. 4 during 1932 comprise the erection of a 15-ton capacity mill with concentration and flotation process, on the Geyser mine property in Dolores County; the erection of a 25-ton capacity mill with concentration and amalgamation process on the Monarch mine property, the erection of a 50-ton capacity mill with concentration process on the May Day mine property, and the installation of a compressor plant on the Jumbo mine property in La Plata County; the erection of mine buildings and the installation of a compressor plant on the Jumbo group in Ouray County; the erection of a 25-ton capacity mill with concentration process on the Lead-Carbonate mine property, and the erection of new mine buildings on the San Juan Queen mine property, in San Juan County; the erection of a 10-ton capacity mill with concentration and amalgamation process on the Nellie and Laura mine property, and the erection of a tramway terminal and construction of an aerial tramway 2500 feet in length on the Smuggler-Union mine property in San Miguel County. Also in San Miguel County there is in progress the erection of a new mill of 400 tons daily capacity to be operated for the treatment of the mill tailings and placer material on the property known as the Gold Run Placer claim.

The described level of mining activities which have persisted in this district during the present year together with the favorable prospects of still further increases in 1933 can be registered as substantial contributions to the much needed equilibrium for all lines of basic industry. The interest and efforts in the search for gold-bearing properties this year devolved largely upon those with limited funds, and necessarily extensive development of the new discoveries have been impeded. The aid of capital in such endeavors would expedite development and gold production and thereby contribute greatly to the progress and benefit of our state and nation.

NONMETALLIC MINES

The operation of nonmetallic mines and quarries during the past few years in Colorado has developed into one of the state's most important industries. Any demand for building or monumental stone of every kind, such as granite, marble, onyx and so on, can be fully supplied from their stupendous stores in various parts of the state. Many quarries have been opened along the eastern mountains, the Arkansas and Platte rivers, in Gunnison, Pitkin and in other counties of the western slope. Building sands and gravels are found in abundance along all rivers and streams.

The clay deposits of Colorado for all purposes are unexcelled. It is highly improbable that any desired industrial clay could not be found within the state's confines. Feldspar, fluorspar, bentonite, sillimanite, lime, gypsum and the like are found in large quantities. Enormous oil shale deposits, also bitumen, asphalt and tar sands exist in several of the western counties. Mica, jefferisite, muscovite and other insulating materials are widely distributed throughout the state.

During the past year 58 quarries and pits were in active operation in Colorado, as shown in the appended table of "Operating Quarries and Clay Pits for 1932."

The name, location and character of products of the various quarries and pits appear in this report under the heading "Operating Quarries and Clay Pits" and more detailed mention in the "Review of the Mining Districts" by the state mine inspectors.

HISTORICAL NOTE

The Bureau of Mines of the State of Colorado was established by an act of the Tenth General Assembly, approved March 30, 1895. This act repealed a previous act creating an ''Inspector of Metalliferous Mines,'' which was passed in 1889. The Bureau of Mines law established the office of Commissioner of Mines, provided for in the State Constitution, and charged him, among other things, with the supervision of metal mine inspection and the enforcement of laws relating to safety and health in metal mines. Subsequently this was broadened to include ''any ore mill, sampling works, smelter, metallurgical plant, rock quarry, clay pit, railroad tunnel, rock excavation or mine of whatsoever kind or character, except coal mines.'' The Commissioner of Mines was also charged, ''as he has opportunity and means,'' to collect mineral specimens and exhibit the same, to collect books relating to mining and geology, to collect and preserve data regarding mining methods, mining costs, milling, metallurgy, geology, mineral deposits of all kinds, and so on. Aside from the purchase of the Elsner collection of minerals, very little ''opportunity and means'' has been granted to the Commissioners for anything except inspection work. The present activities of the Bureau of Mines are treated elsewhere in this report.

COMMISSIONERS OF MINES

Harry A. Lee	May 11, 1895-May 10, 1903
E. L. White	May 10, 1903-May 10, 1907
T. J. Dalzell	May 10, 1907-May 10, 1911
T. R. Henahen	May 10, 1911-May 10, 1915
Fred Carroll	May 10, 1915-June 1, 1919
Horace F. Lunt	June 1, 1919-June 1, 1923
John T. Joyce	June 1, 1923-June 1, 1927
John T. Joyce	June 1, 1927-June 1, 1931
John T. Joyce	June 1, 1931-

PUBLICATIONS OF THE BUREAU OF MINES

BULLETINS

Bulletin No. 1, Recommendations for Safety Appliance in Mining, Harry A. Lee, Commissioner of Mines, 1896.

Bulletin No. 2, Precious Metal Production for the year 1898, Harry A. Lee, Commissioner of Mines, 1899.

Bulletin No. 3, Mining Laws, Relative to Bureau of Mines Precious Metal Production, Harry A. Lee, Commissioner of Mines, 1899.

Bulletin No. 4, Precious Metal Production, Harry A. Lee, Commissioner of Mines, 1901.

Bulletin No. 5, Precious Metal Production, Harry A. Lee, Commissioner of Mines, 1902.

Bulletin No. 6, Regulations Relative to the Construction, Equipment and Operation of Metalliferous Mines, Mills and Metallurgical Plants, Recommendations and Mineral Production for 1905, E. L. White, Commissioner of Mines, 1906.

Bulletin No. 7, Federal and State Laws Relating to Mining, Fred Carroll, Commissioner of Mines, 1916.

Supplement to Bulletin 7, Mining Laws Enacted by the Twenty-first General Assembly, Fred Carroll, Commissioner of Mines, 1917.

Supplement No. 2 to Bulletin No. 7, Amendments to the Mining Laws Enacted by the Twenty-second General Assembly, Horace F. Lunt, Commissioner of Mines, 1919.

Supplement No. 3 to Bulletin 7, Amendments to Laws Relating to Mining Enacted by the Twenty-third General Assembly. Horace F. Lunt, Commissioner of Mines, 1921.

Supplement No. 4 to Bulletin 7, Amendments to Laws Relating to Mining Enacted by the Twenty-fourth General Assembly, Horace F. Lunt, Commissioner of Mines, 1923.

Bulletin No. 8, The Oil Shales of Northwestern Colorado, Horace F. Lunt, Commissioner of Mines, 1919.

Bulletin No. 9, Mine Safety Standards, Horace F. Lunt, Commissioner of Mines, 1920.

REPORTS

Report of Bureau of Mines, Colorado, from its establishment in May, 1895, to November 30, 1896, Harry A. Lee, Commissioner of Mines, 1896.

Report for the Year 1897, Harry A. Lee, Commissioner of Mines, 1898.

Report for the Year 1898, Harry A. Lee, Commissioner of Mines, 1899.

Biennial Report for the Years 1899-1900, Harry A. Lee, Commissioner of Mines, 1900.

Biennial Report for the Years 1901-1902, Harry A. Lee, Commissioner of Mines, 1903.

Biennial Report for the Years 1903-1904, E. L. White, Commissioner of Mines, 1905.

Biennial Report for the Years 1905-1906, E. L. White, Commissioner of Mines, 1907.

Biennial Report for the Years 1907-1908, T. J. Dalzell, Commissioner of Mines, 1909.

Biennial Report for the Years 1909-1910, T. J. Dalzell, Commissioner of Mines, 1911.

Biennial Report for the Years 1911-1912, T. R. Henahen, Commissioner of Mines, 1913.

Biennial Report for the Years 1913-1914, T. R. Henahen, Commissioner of Mines, 1914.

Biennial Report for the Years 1915-1916, Fred Carroll, Commissioner of Mines, 1916.

Biennial Report for the Years 1917-1918, Fred Carroll, Commissioner of Mines, 1919.

Annual Report for the Year 1919, Horace F. Lunt, Commissioner of Mines, 1920.

Annual Report for the Year 1920, Horace F. Lunt, Commissioner of Mines, 1921.

Annual Report for the Year 1921, Horace F. Lunt. Commissioner of Mines, 1922.

Annual Report for the Year 1922, Horace F. Lunt, Commissioner of Mines, 1923.

Annual Report for the Year 1923, John T. Joyce, Commissioner of Mines, 1924.

Annual Report for the Year 1924, John T. Joyce, Commissioner of Mines, 1925.

Annual Report for the Year 1925 was fully prepared but because of lack of funds was not printed. The manuscript is on file in the office of the State Bureau of Mines.

Annual Report for the Year 1926, John T. Joyce, Commissioner of Mines, 1927.

Annual Report for the Year 1927, John T. Joyce, Commissioner of Mines, 1928.

Annual Report for the Year 1928, John T. Joyce, Commissioner of Mines, 1929.

Annual Report for the Year 1929, John T. Joyce, Commissioner of Mines, 1930.

Annual Report for the Year 1930, John T. Joyce, Commissioner of Mines, 1931.

Annual Report for the Year 1931, John T. Joyce, Commissioner of Mines, 1932.

At the time this report goes to press, there are available for distribution copies of the Annual Reports for 1921, 1922, 1926, 1928 and 1930, and Bulletin 11, "Mining Laws of Colorado." The price of Bulletin 11 is 50 cents (coin), also Bulletins 8 and 9; all other available publications are free. The publications not mentioned in this paragraph are exhausted, but copies may be consulted in many of the public, state and college libraries throughout the country.

Note—The Colorado Geological Survey has published a number of geological reports and maps, a list of which may be obtained from Dr. R. D. George, Head Geology Department of the University of Colorado, Boulder, Colorado.

Acknowledgment

Thanks are due to the United States Bureau of Mines for the assistance rendered by Mr. E. H. Denny and Mr. E. A. Anundsen in preparation of the Rules and Regulations contained in Bulletin 11, published by this Department, in reference to the protection of life, limb and health of employees and of property.

Colorado Mineral Production U. S. Bureau of Mines Since 1859

	1859-1929	1930
Gold	$ 710,691,000	$ 4,516,196
Silver	516,729,000	1,651,876
Copper	44,993,000	1,213,588
Lead	215,236,000	2,321,592
Zinc	151,673,000	3,426,441
Coal	700,754,000	20,490,000
Tungsten	19,450,000	75,000
Radium	18,000,000	....
Petroleum	28,120,000	1,242,257
Molybdenum	10,793,000	2,500,000
Vanadium	6,287,000	618,537
Fluorspar	1,938,000	115,000
Iron	3,872,000	44,000
Manganese	4,095,000	112,000
	$2,432,631,000	$38,326,487
Grand Total		$2,470,957,487

TABLE I

PRODUCTION OF THE PRINCIPAL METALS IN COLORADO IN 1931 AND 1932[1]

	GOLD[2]				SILVER[2]				COPPER				LEAD				ZINC				TOTAL VALUE			
	1931		1932		1931		1932		1931		1932		1931		1932		1931		1932		1931	1932		
	Fine Ounces	Value	Fine Ounces	Value	Fine Ounces	Value	Fine Ounces	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value			Increase or Decrease	County
Adams	66.03	$ 1,365	4.01	$ 83	7	$ 2															$ 1,367	$ 83	— $ 1,284	Adams
Arapahoe	11.22	232	1.98	41																	232	41	— 191	Arapahoe
Boulder	1,335.54	27,608	3,853.99	79,669	3,545	1,028	10,031	$ 2,829					4,595	$ 170	2,000	$ 56					28,806	82,554	+ 53,748	Boulder
Chaffee	122.49	2,532	151.02	3,122	14	4	808	228							8,000	224					2,536	3,574	+ 938	Chaffee
Clear Creek	3,652.41	75,502	5,858.03	121,096	22,614	6,558	27,433	7,736	8,758	$ 797	4,000	$ 244	94,000	3,478	67,000	1,876					86,335	130,952	+ 44,617	Clear Creek
Costilla			7.98	165																		165	+ 165	Costilla
Custer	32.70	676	.97	20	410	119							15,487	573							1,368	20	1,348	Custer
Denver	28.93	598	22.98	475			6	2													598	477	— 121	Denver
Dolores	33.72	697			1,648	478			2,000	182			69,000	2,553			82,000	$ 3,116			7,026		— 7,026	Dolores
Douglas	39.08	808	7.01	145																	808	145	— 663	Douglas
Eagle	3,728.55	77,076	2,933.99	60,651	1,497,131	434,168	1,091,826	307,895	6,647,000	604,877	5,687,000	346,907	7,631,000	282,347	761,000	21,308	26,518,000	1,007,684			2,406,152	736,761	— 1,669,391	Eagle
Elbert	1.93	40	22.01	455																	40	455	+ 415	Elbert
Fremont			11.99	248			2	1														249	+ 249	Fremont
Gilpin	16,370.29	338,401	16,579.06	342,719	20,807	6,031	25,549	7,205	95,000	8,645	47,000	2,867	92,700	3,430	170,000	4,760			83,000	$2,573	356,513	360,124	+ 3,611	Gilpin
Grand			1.98	41																		41	+ 41	Grand
Gunnison	183.68	3,797	139.99	2,894	4,107	1,191	48	14	505	46			76,784	2,841							7,875	2,908	4,967	Gunnison
Hinsdale	29.46	609	74.98	1,550	207	60	872	246							2,000	56					669	1,852	+ 1,183	Hinsdale
Huerfano			1.98	41																		41	+ 41	Huerfano
Jackson			1.98	41																		41	+ 41	Jackson
Jefferson	1.60	33	4.98	103			5	1													33	104	+ 71	Jefferson
Kiowa			8.99	186																		186	+ 186	Kiowa
Lake	5,054.71	104,490	7,636.01	157,850	81,183	23,543	19,607	5,529	33,308	3,031	12,000	732	2,940,514	108,799	176,000	4,928	5,773,000	219,374	160,000	4,960	459,237	173,999	— 285,238	Lake
La Plata	616.88	12,752	1,522.02	31,463	2,317	672	7,085	1,998					190	7	7,000	196					13,431	33,657	+ 20,226	La Plata
Larimer			2.99	62																		62	+ 62	Larimer
Mesa			1.98	41																		41	+ 41	Mesa
Moffat	8.95	185	59.02	1,220	100	29	4	1	18,000	1,638											1,852	1,221	— 631	Moffat
Montrose	18.19	376	83.98	1,736	7	2	25	7													378	1,743	+ 1,365	Montrose
Ouray	9,760.34	201,764	11,712.01	242,109	40,586	11,770	40,792	11,503	73,331	6,673	81,000	4,941	368,052	13,618	296,000	8,288			8,000	248	233,825	267,089	+ 33,264	Ouray
Park	42,172.79	871,789	132,597.21	2,741,023	28,531	8,274	64,752	18,260	21,198	1,929	14,000	854	779,190	28,830	1,586,000	44,408					910,822	2,804,545	+ 1,893,723	Park
Pitkin	85.72	1,772	53.02	1,096	37,169	10,779	44,771	12,626	1,000	91			282,000	10,434	220,000	6,160					23,076	19,882	— 3,194	Pitkin
Rio Grande	50.94	1,053	7.01	145	76	22	3	1													1,076	146	— 929	Rio Grande
Routt	4.55	94	22.01	455			9	3													94	458	+ 364	Routt
Saguache	7.93	164	17.99	372	1,507	437	20	6	5,000	455			62,000	2,294							3,350	378	— 2,972	Saguache
San Juan	31,308.69	647,208	25,097.04	518,801	430,793	124,930	408,189	115,109	1,250,505	113,796	1,386,000	84,546	1,134,000	41,958	811,000	22,708					927,892	741,161	— 186,728	San Juan
San Miguel	2,209.13	45,667	2,978.02	61,561	9,324	2,704	3,809	1,071	5,395	491			183,488	6,789	8,000	224					55,651	62,859	+ 7,208	San Miguel
Summit	951.73	19,674	1,433.01	29,623	5,631	1,633	1,440	406	4,000	364			35,000	1,295	1,000	28					22,966	30,057	+ 7,091	Summit
Teller	115,411.57	2,385,769	109,326.18	2,259,969	8,200	2,378	11,958	3,372													2,388,147	2,263,341	124,806	Teller
Total	233,299.75	$4,822,734	322,239.43	$6,661,271	2,195,914	$636,815	1,759,047	$496,052	8,165,000	$743,015	7,231,000	$441,091	13,768,000	$509,416	4,115,000	$115,220	32,373,000	$1,230,174	251,000	$7,781	[4]$7,942,154	[3]$7,721,415	— $ 220,739	

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[1] Actual 11 months' figures, with estimate for December.

[2] Includes placer production.

[3] Average value of metals: Gold, $20.671835 per ounce; silver, $0.282 per ounce; copper, $0.061 per pound; lead, $0.028 per pound; zinc, $0.031 per pound

[4] Average value of metals: Gold, $20.671835 per ounce; silver, $0.29 per ounce; copper, $0.091 per pound; lead, $0.037 per pound; zinc, $0.038 per pound

THE VALUE OF STATE INSPECTION IN LESSENING MINE ACCIDENTS

Colorado had the highest average in mine accidents of all the states in the Union for the years 1931 and 1932. A deplorable record due largely to carelessness, that should and can be overcome by constant alertness on the part of the management and employees themselves by a strict observance of our standards of safety laws and departmental regulations. I wish to emphatically impress upon both the operators and employees the importance of taking every possible precaution to reduce accidents to the lowest minimum by giving more attention and less disregard of the orders and recommendations of this department and thereby not only making a material saving for operators but also a great saving to this state.

With that thought in mind I am reproducing my article on this subject from my report for 1930.

"Life is the most precious of all man's possessions and the utmost effort on the part of the State, industry, and the individual is justified in the conservation of the lives and unimpaired well-being of the worker. The State of Colorado in 1908 recognized its responsibility for the safety of the mine worker by the enactment of statutes covering the establishment of a department to be known as the Bureau of Mines of the State of Colorado with a commissioner and inspectors and delegating to this department as one of its principal duties the examination of mines, mills, and quarries, as to safety and health conditions. This department has the power to order corrected, under penalty of heavy fine, dangerous conditions found.

"By legislative act of 1911 the State was divided into 4 inspection districts for the purpose of rigid enforcement of accident prevention laws.

"The Colorado Bureau of Mines, therefore, is vitally interested in the lessening of accidents in mines. Its inspectors examine into safety conditions at mines, mills, smelters, and quarries and make a diligent investigation of fatal and serious accidents and advise where possible means of preventing a repetition of such accidents. Reports on all mine, mill, smelter, and quarry accidents which are furnished by the operators to the State Industrial Commission are studied and compiled for publication in the annual report of this Department. There were recently compiled in this department statistics on all metal mine accidents in Colorado for the present and past two eight-year periods, the summary of which is appended.

''These figures demonstrate that the lessening of accidents in Colorado metal mines as in those of other states requires continued united effort on the part of mine operators and miners and continued inspection and guidance by an adequate force of state mine inspectors.

''The value of state inspection in lessening mine accidents is difficult to enumerate in units only of dollars and cents and has a value to the industry and the public far greater than can be measured on a direct cost basis. We cannot usually say in any particular mine that a certain number of lives have been saved by the righting of recognized dangerous conditions or by safer equipment and practices, but we do know that taking the state or country as a whole dangerous conditions, unsafe equipment, and unsafe practices in mines will each year take its toll of life and suffering and that the righting of such conditions and practices will inevitably save life. We know at the end of each year how many lives have been lost in our mines but we cannot definitely say how many lives have been saved by inspection service; that many lives are thus saved is self-evident, which is borne out by the figures mentioned. State inspection service results not only in the correction of dangerous conditions and practices but it also spurs the mine operator to increased thought and effort toward safety and the miner to increased carefulness. Both miner and operator are reminded by these inspectors that the state has a very definite interest in both the personal security of the miner and the continued successful operation of the mine. Also, the inspector through his visits to numerous mines and through information collected by the Department is able to suggest numerous measures which make toward safer and more economical mine operation.

''Summarizing, a state mine inspection department is of very definite value in reducing accidents, promoting the safety and welfare of miner and operator, and in assisting in the successful operation of mines. A state mine inspection department can only operate with proper efficiency and success in reducing accidents if it has an adequate number of inspectors furnished with funds adequate for regular inspections and if it has the cordial and hearty support of the mine operator, the miner, and the public. The Colorado State Bureau of Mines pledges its continued effort toward the reduction of mine accidents and believes that in this most important work it will have, as it has always had from the Colorado mine operators, continued and even more hearty support from that highly important factor in the prosperity of our state."

SUMMARY

Three 8-year periods on the basis of 100,000 shifts.

From 1906 to 1914, inc., 23,100,000 shifts were worked, 511 men were killed, ratio per 100,000 shifts........................ 2.22

From 1915 to 1922, inc., 25,468,000 shifts were worked, 342 men were killed, ratio per 100,000 shifts........................ 1.35

From 1923 to 1930, inc., 16,148,154 shifts were worked, 167 men were killed, ratio per 100,000 shifts........................ 1.00

From 1931 to 1932, inc., 2,302,066 shifts were worked, 23 men were killed, ratio per 100,000 shifts........................ 0.99

FATAL ACCIDENTS

Underground.

March 2, Isaac Hougland, of Tiger, age about 50, married, miner, while employed at the Royal Tiger Mines, Summit County, apparently fainted while working in a glory hole and fell 25 feet into an incline raise, causing fatal injuries. Unavoidable accident.

April 9, Charles J. Huffman, of Silverton, age 23, mucker, unmarried, while employed at the Shenandoah-Dives mine, San Juan County, received a shock from contact with electric wires carrying a voltage of 440 while examining an electric heater. Caused almost instant death. Carelessness of injured.

August 13, Gus Webber, of Russell Gulch, age 45, miner, unmarried, while employed at the Saratoga mine, Gilpin County, was instantly killed by fall of rock. Unavoidable accident.

September 10, G. Eller Wolcott, of Victor, age 54, machine man, married, while operating a leased block of ground above the 900-foot level from the Last Dollar shaft, Teller County, apparently fell head first, while climbing to his drilling staging, and struck his head on projecting corner of the wall, about 18 feet below. Died of his injuries the next day. Unavoidable.

October 18, David Foster, of Alma, age 43, divorced, machineman, while employed at the London mine, Park County, was killed instantly by fall of rock. Unavoidable accident.

December 26, Harold R. Houghton, of Cripple Creek, age 32, married, trammer, while employed at the Cresson mine, Teller County, was killed instantly by fall of rock. Unavoidable accident.

Shaft.

July 30, Nicholas R. Herivel, of Boulder, age 81, married, superintendent and manager of the California mine, Boulder County, while going down shaft, slipped off bucket and fell 50 feet to bottom of shaft. Died four hours later. Carelessness of injured.

Surface

February 27, Clyde Clark, of Idaho Springs, age 57, unmarried, while employed as lessee on the Chain O'Mines property in Gilpin County, approached a truck with empty cars and pulled the controller the wrong way. He collided with the rear of the truck, causing injuries from which he died two hours later. Carelessness of injured.

March 19, John Edward Franklin, of Victor, age 64, married, miner, while employed at the Golden Cycle mine, Teller

County, slipped into the cable of hoist in engine room and was jerked under and around the drum with a lap of cable over his body. He was killed instantly. Carelessness of injured.

September 14, John C. Carrig, of Leadville, age 65, unmarried, master mechanic, while employed at the Ibex Mines, Lake County, was shooting out stubs of the wooden headframe. Carrig thought he had failed to ignite the fuse and returned to relight it, when blast knocked him 10 feet. Died of injuries three days later. Carelessness of injured.

Smelter.

December 21, John Zaler, of Leadville, age 50, unmarried, motorman and straw boss, while employed at the Arkansas Valley smelter, Lake County, died from suffocation. He either fainted or lost his balance and fell from his seat on the motor he was driving into an open hopper. The ore that had been sticking to the sides of the hopper fell on him, causing suffocation. The accident could have been avoided by replacing the grizzly cover over hopper.

Rock Excavation.

February 23, Chris T. Nelson, age 66, unmarried, while employed at excavation for the county of El Paso, was killed shoveling gravel into a truck with his back turned to the face of the gravel pit. A portion of the face broke away crushing him. Death resulted in ten hours. The cliff should have been scaled down.

October 16, Ralph C. Poucher, age 41, employed at West Portal. He was drilling a down hole when he came in contact with a missed hole killing him instantly. The missed hole was a lifter and had been there since the tunnel was first driven. Unavoidable accident.

TABLE II

DAYS OF EMPLOYMENT IN AND ABOUT MINES, MILLS AND SMELTERS, AND NUMBER OF MEN KILLED AND INJURED PER 10,000 DAYS OF EMPLOYMENT DURING THE YEARS 1931 AND 1932.

	Employment Days of		Killed				Serious Injury (Time Lost Over 14 Days)				Slight Injury (Time Lost Under 14 Days)			
			1931		1932		1931		1932		1931		1932	
	1931	1932	No. of Accidents	Rate Per 10,000 Days	No. of Accidents	Rate Per 10,000 Days	No. of Accidents	Rate Per 10,000 Days	No. of Accidents	Rate Per 10,000 Days	No. of Accidents	Rate Per 10,000 Days	No. of Accidents	Rate Per 10,000 Days
Underground	530,414	540,120	9	.1696	7	.1296	131	2.469	148	2.740	322	6.070	254	4.702
Surface	205,800	212,406	1	.0485	3	.1412	42	2.040	43	2.024	84	4.081	69	3.248
Mills	200,796	207,998	1	.0498	..	....	6	.2988	6	.2885	13	.6474	28	1.346
Smelters	92,659	69,656	1	.1079	1	.1435	5	.5396	5	.7177	6	.6475	1	.1409
Quarries	153,581	50,467	..	....	..	....	20	1.302	7	1.387	46	2.995	15	2.972
Placer Mines and Dredges	12,186	25,983	..	....	..	....	1	.8206	4	1.538	3	2.461	3	1.154

There were, in 1932, two fatal accidents in rock excavations, the inspection of which, under the recent law, was placed under the jurisdiction of this office, and cannot be properly classed as accidents in mines or mills.

TABLE III

CLASSIFICATION ACCORDING TO CAUSE OF ALL ACCIDENTS IN THE METAL MINING AND QUARRYING INDUSTRY IN THE STATE OF COLORADO DURING THE YEARS 1931 AND 1932.

	Fatal		Serious Injuries (Time lost over 14 days)						Slight Injuries (Time lost under 14 days)	
			Permanent Total Disability		Permanent Partial Disability		Temporary Disability			
UNDERGROUND	1931	1932	1931	1932	1931	1932	1931	1932	1931	1932
1. Falls of rock or ore from roof or walls	7	3	..	..	..	..	22	36	58	55
2. Handling of rock or ore—										
(a) Loading at face	..	..	..	..	..	..	..	1	6	4
(b) Loading at chute	..	..	..	..	1	..	16	11	32	18
(c) Sledging	..	..	..	..	..	..	1	1	4	3
3. Timber or hand tools										
4. Explosives—	..	..	..	..	..	..	12	4	29	8
(a) Transportation	..	..	..	..	..	..	..	..	..	..
(b) Charging	..	..	..	..	..	..	..	..	..	..
(c) Suffocation	..	..	..	..	..	..	..	..	..	..
(d) Drilling into old holes	..	..	..	..	..	..	..	..	1	..
(e) Striking in loose rock	..	..	..	..	..	..	..	..	..	..
(f) Thawing	..	..	..	..	..	..	..	..	..	..
(g) Caps, detonators, etc.	..	..	..	..	..	..	..	..	..	..
(h) Unguarded shots	..	..	..	..	..	..	..	1	..	..
(i) Returned too soon	..	..	..	..	.	..	..	..	..	..
(j) Premature shot	..	..	..	..	..	..	..	2	..	2
(k) Miscellaneous	..	..	..	..	1	..	1	..	3	1
5. Haulage—										
(a) Hand and animal	..	..	..	..	..	..	9	5	14	14
(b) Mechanical	..	..	..	..	..	..	6	7	8	2
6. Persons falling down chute, winze, raise or stope	1	2	..	..	..	..	13	13	19	10
7. Run of ore from chute or pocket	..	..	..	..	.	..	2	1	1	1
8. Drilling (by machine or hand drills)	..	..	..	..	..	1	14	15	43	40
9. Electricity—										
(a) Direct contact with trolley wire	..	..	..	..	..	..	..	..	..	..
(b) Tool or bar striking trolley wire	..	..	..	..	..	..	..	..	1	..
(c) Contact with motor	..	..	.	..	..	..	..	..	..	..
(d) Other causes	..	1	..	..	1	..	..	..	5	..

CLASSIFICATION ACCORDING TO CAUSE OF ALL ACCIDENTS IN THE METAL MINING AND QUARRYING INDUSTRY IN THE STATE OF COLORADO DURING THE YEARS 1931 AND 1932—Continued.

		Fatal		Serious Injuries (Time lost over 14 days) Permanent Total Disability		Permanent Partial Disability		Temporary Disability		Slight Injuries (Time lost under 14 days)	
		1931	1932	1931	1932	1931	1932	1931	1932	1931	1932
	UNDERGROUND—Continued										
10.	Machinery other than 5 and 8	..	..	..	..	..	1	1	1	1	..
11.	Mine fires	..	..	..	..	..	..	..	..	..	..
12.	Suffocation from natural gases	1	..	..	..	..	..	1	1	1	..
13.	Inrush of water	..	..	..	..	..	..	..	..	..	..
14.	Nails and splinters	..	..	..	..	..	..	3	..	7	2
15.	Other causes—										
	(a) Falling objects other than 1 and 2	..	..	..	..	1	1	6	9	13	9
	(b) Flying objects other than 2 (c)	..	..	..	..	..	..	4	..	22	18
	(c) Burns	..	..	..	..	..	..	..	..	..	..
	(d) Miscellaneous	..	..	..	..	..	..	12	26	48	47
	Total	9	6	..	..	4	3	123	134	316	234
	SHAFT										
16.	Falling down shaft	..	1	..	..	..	..	..	..	1	..
17.	Objects falling down shaft	..	..	..	..	..	..	..	..	2	..
18.	Breaking of cables	..	..	..	..	..	..	..	..	..	..
19.	Overwinding	..	..	..	..	..	..	..	..	..	..
20.	Cage, skip or bucket—										
	(a) Runaway	..	..	..	..	..	..	..	..	..	1
	(b) Riding with rock or ore	..	..	..	..	..	..	..	..	..	..
	(c) Riding with timber or tools	..	..	..	..	..	..	..	1	..	..
	(d) Struck by	..	..	..	..	..	..	1	1	..	2
21.	Other causes	..	..	..	..	..	1	3	8	3	17
	Total	..	1	..	..	..	1	4	10	6	20
	SURFACE SHOPS AND PLANTS										
22.	Haulage—										
	(a) Hand and animal	..	..	..	..	..	..	1	2	6	3
	(b) Mechanical	..	1	..	..	..	..	4	2	2	3
23.	Railway cars and locomotives	..	..	..	..	..	..	..	..	2	..

24.	Run or fall of ore in or from bins	..	..	..	..	..	..	..	..	2	..
25.	Falls of persons	..	..	..	..	..	..	8	3	8	12
26.	Nails and splinters	..	..	..	..	..	..	..	..	6	3
27.	Hand tools, axes, bars, etc	..	..	..	..	..	..	4	2	7	1
28.	Electricity—										
	(a) Direct contact with trolley wire	..	..	..	..	..	..	2	..	..	..
	(b) Tool or bar striking trolley wire	..	..	..	..	..	..	..	..	..	..
	(c) Contact with motor	..	..	..	..	..	..	..	..	..	..
	(d) Other causes	1	..	..	..	..	..	..	2	1	1
29.	Machinery	..	1	..	..	1	..	4	4	5	2
30.	Other causes—										
	(a) Falling objects	..	..	..	..	..	..	3	3	9	3
	(b) Flying objects	..	1	..	..	1	..	2	2	11	2
	(c) Burns	..	..	..	..	..	..	..	..	2	1
	(d) Miscellaneous	..	..	..	..	1	1	11	22	23	38
	Total	1	3	..	..	3	1	39	42	84	69
	PLACER MINES—DREDGING										
1.	Machinery	..	..	..	..	..	..	..	1	..	..
2.	Electricity	..	..	..	..	..	..	..	..	..	..
3.	Boiler explosions or bursting of steam pipes	..	..	..	..	..	..	..	1	..	..
4.	Falls of persons	..	..	..	..	..	..	1	1	..	1
5.	Hand tools	..	..	..	..	..	..	..	1	..	..
6.	Other causes	..	..	..	..	..	..	..	..	3	2
	Total	..	..	..	..	..	..	1	4	3	3
	ORE DRESSING AND MILLING										
1.	Haulage system—										
	(a) Cars and motors	..	..	..	..	..	..	..	1	..	..
	(b) Mechanical conveyors	..	..	..	..	..	..	1	..	1	1
2.	Railway cars and locomotives	..	..	..	..	..	..	..	..	..	1
3.	Crushers, rolls or stamps	..	..	..	..	..	..	..	..	..	1
4.	Tables, jigs, etc	..	..	..	..	..	..	..	..	..	..
5.	Other machinery	..	..	..	..	..	..	1	..	1	2
6.	Falls of persons	1	..	..	..	..	..	2	..	1	5
7.	Suffocation in ore bins	..	..	..	..	..	..	..	..	..	..
8.	Falling objects (rocks, timber, etc.)	..	..	..	..	..	..	..	1	1	1

CLASSIFICATION ACCORDING TO CAUSE OF ALL ACCIDENTS IN THE METAL MINING AND QUARRYING INDUSTRY IN THE STATE OF COLORADO DURING THE YEARS 1931 AND 1932—Continued.

				Serious Injuries (Time lost over 14 days)						Slight Injuries (Time lost under 14 days)	
		Fatal		Permanent Total Disability		Permanent Partial Disability		Temporary Disability			
		1931	1932	1931	1932	1931	1932	1931	1932	1931	1932
	ORE DRESSING AND MILLING—Continued										
9.	Cyanide or other poisoning	..	..	..	..	..	..	..	..	..	..
10.	Scalding (steam or water)	..	..	..	..	..	..	..	1	..	..
11.	Electricity	..	..	..	..	..	..	1	1	..	5
12.	Hand tools, axes, bars, etc.	..	..	..	..	..	..	..	..	1	2
13.	Nails, splinters, etc.	..	..	..	..	..	..	..	..	1	..
14.	Flying pieces of rock from sledging or crushing	..	..	..	..	..	..	..	..	2	1
15.	Other causes	..	..	..	..	..	..	1	2	5	9
	Total	1	..	..	..	..	..	6	6	13	28
	SMELTER										
16.	Haulage system—										
	(a) Cars and motors	1	..	..	..	..	..	..	..	..	..
	(b) Mechanical conveyors	..	..	..	..	..	..	..	..	..	..
	(c) Hand and animal	..	..	..	..	..	..	..	..	..	..
17.	Railway cars and locomotives	..	..	..	..	..	..	..	..	..	..
18.	Cranes	..	..	..	..	..	..	..	..	..	..
19.	Other machinery	..	..	..	..	..	..	..	..	1	..
20.	Falls of persons	..	..	..	..	..	..	..	1	..	..
21.	Suffocation in ore bins	..	1	..	..	..	..	..	..	..	..
22.	Flying or falling objects (rocks, timbers, etc.)	..	..	..	..	..	..	..	..	..	..
23.	Gas (burns or asphyxiation)	..	..	..	..	..	..	..	..	1	..
24.	Scalding (steam or water)	..	..	..	..	..	..	..	..	..	..
25.	Electricity	..	..	..	..	..	..	..	1	..	..
26.	Hand tools, axes, bars, etc.	..	..	..	..	..	..	..	..	..	1
27.	Nails, splinters, etc.	..	..	..	..	..	..	..	1	..	..
28.	Burns from matte, slag, or molten metal (pouring or spilling)	..	..	..	..	..	..	..	..	1	..

29. Hot metal explosions	..	..	..	..	..	..	1	..	1	..
30. Other causes	..	..	..	..	..	..	2	2	1	..
Total	1	1	..	..	..	..	3	5	5	1
AUXILIARY WORKS										
31. Haulage systems	..	..	..	..	..	..	..	..	..	..
32. Railway cars and locomotives	..	..	..	..	..	..	..	..	..	..
33. Falls of persons	..	..	..	..	..	..	..	..	..	..
34. Falling objects (rocks, timbers, etc.)	..	..	..	..	..	..	..	..	1	..
35. Nails, splinters, etc.	..	..	..	..	..	..	..	..	..	..
36. Hand tools, axes, bars, etc.	..	..	..	..	..	..	..	..	..	..
37. Electricity	..	..	..	..	..	..	..	..	..	..
38. Machinery	..	..	..	..	..	..	1	..	..	..
39. Failure of ladder, scaffold, or other support	..	..	..	..	..	..	..	..	..	..
40. Handling hot materials	..	..	..	..	..	..	..	..	..	..
41. Other causes	..	..	..	..	..	..	1	..	..	..
Total	..	..	..	..	..	..	2	..	1	..
IN AND ABOUT QUARRY										
1. Falls or slides of rock or overburden	..	..	..	..	..	..	4	..	5	1
2. Handling rock at face	..	..	..	..	..	..	2	..	2	..
3. Timber or hand tools	..	..	..	..	..	..	3	..	3	..
4. Explosives—										
(a) Transportation	..	..	..	..	..	..	..	..	..	..
(b) Charging	..	..	..	..	..	..	..	..	..	..
(c) Drilling into old holes	..	..	..	..	..	..	..	..	..	..
(d) Striking in loose rock	..	..	..	..	..	..	..	..	..	..
(e) Thawing	..	..	..	..	..	..	..	..	..	..
(f) Caps, detonators, etc.	..	..	..	..	..	..	..	..	..	..
(g) Unguarded shots	..	..	..	..	..	..	..	..	..	..
(h) Returned too soon	..	..	..	..	..	..	..	..	..	..
(i) Premature shot	..	..	..	..	..	..	..	..	..	..
(j) Delayed blast	..	..	..	..	..	..	..	1	..	..
(k) Miscellaneous	..	..	..	..	..	..	..	..	2	..
5. Haulage—										
(a) Hand and animal	..	..	..	..	1	..	..	..	1	..
(b) Mechanical	..	..	..	..	..	..	1	..	2	2

CLASSIFICATION ACCORDING TO CAUSE OF ALL ACCIDENTS IN THE METAL MINING AND QUARRYING INDUSTRY IN THE STATE OF COLORADO DURING THE YEARS 1931 AND 1932—Continued.

				Serious Injuries (Time lost over 14 days)						
	Fatal		Permanent Total Disability		Permanent Partial Disability		Temporary Disability		Slight Injuries (Time lost under 14 days)	
	1931	1932	1931	1932	1931	1932	1931	1932	1931	1932
IN AND ABOUT QUARRY—Continued										
6. Falling into quarry from surface, benches, or face	..	..	..	..	..	..	..	..	1	1
7. Falling from hoist, derricks, ladders, etc.	..	..	..	..	..	..	..	1	1	1
8. Drilling and channeling (by machinery or hand)	..	..	..	..	..	..	..	1	..	3
9. Electricity (shock or burns)	..	..	..	..	..	..	..	..	..	1
10. Machinery—										
(a) Cables and attachments	..	..	..	..	..	..	..	..	..	..
(b) Guys, masts, booms and attachments	..	..	..	..	..	..	..	..	..	..
(c) Pumps and hoisting engines	..	..	..	..	..	..	1	..	..	1
11. Flying objects	..	..	..	..	..	..	..	2	3	1
12. Nails, splinters, etc.	..	..	..	..	..	..	..	..	..	1
13. Boiler and air tank explosions	..	..	..	..	..	..	..	..	1	..
14. Falling objects	..	..	..	..	..	..	..	..	5	..
15. Burns	..	..	..	..	..	..	..	1	1	..
16. Other causes	..	..	..	..	..	..	3	1	10	3
Total	..	..	..	..	1	..	14	7	37	15
OUTSIDE WORKS										
17. Haulage—										
(a) Hand and animal	..	..	..	..	..	..	..	..	2	..
(b) Mechanical	..	..	..	..	..	..	..	..	1	..
18. Railway cars and locomotives	..	..	..	..	..	..	..	..	..	..
19. Crushers	..	..	..	..	..	..	..	..	..	..
20. Cranes, derricks, etc.	..	..	..	..	..	..	..	..	..	..
21. Other machinery	..	..	..	..	..	..	..	..	1	1
22. Falls of persons	..	..	..	..	..	..	2	..	..	..
23. Hand tools	..	..	..	..	..	..	..	..	1	..
24. Electricity	..	..	..	..	..	..	..	..	..	..

25. Nails, splinters, etc.	..	..	..	..	..	..	..	..	..	..
26. Flying pieces of rock from sledging or crushing	..	..	..	..	..	..	..	..	3	..
27. Flying or falling objects (rocks, timbers, etc.)	..	..	..	..	..	..	2	..	..	..
28. Handling rock at face	..	..	..	..	..	..	..	..	..	..
29. Burns	..	..	..	..	..	..	..	..	..	..
30. Other causes	..	..	..	..	..	..	1	..	1	..
Total	..	..	..	..	..	..	5	..	9	1
ROCK EXCAVATION										
1. Falls of persons	1	..	..	..	..	..	..	..	..	..
2 Machinery	1	..	..	..	..	..	..	..	..	..
3. Other causes	..	2	..	..	..	..	..	1	..	1
Total	2	2	..	..	..	..	..	1	..	1

TABLE IV

CLASSIFICATION ACCORDING TO CAUSE AND OCCUPATION OF THE FATAL ACCIDENTS THAT OCCURRED IN THE METAL MINING AND QUARRYING INDUSTRY OF COLORADO IN THE YEARS 1931 AND 1932.

MINES

	Superintendents, Foremen and Engineers		Machine Men and Helpers		Miners		Loaders, Shovelers, Muckers and Trammers		Trackmen, Pipemen, Pumpmen and Compressormen		Cage Tenders and Station Cagers		Carpenters, Timbermen and Helpers		Electricians, Motormen and Helpers	
	1931	1932	1931	1932	1931	1932	1931	1932	1931	1932	1931	1932	1931	1932	1931	1932
UNDERGROUND																
1. Falls of rock or ore from roof or wall	..	..	2	1	2	..	3	2	..	..	..	..	..	..	..	..
2. Handling rock or ore	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Timber or hand tools	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4. Explosives	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Haulage	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6. Persons falling down chute, winze, raise or stope	..	..	..	1	1	1	..	..	..	..	..	..	..	..	..	..
7. Run of ore from chute or pocket	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8. Drilling (by machine or hand drills)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9. Electricity	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	.
10. Machinery other than 5 or 8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11. Mine fires	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12. Suffocation from natural gases	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13. Inrush of water	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14. Nails and splinters	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15. Other causes	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	1		2	2	3	1	3	3	..	..	..	..	..	..	..	..
SHAFTS																
16. Falling down shaft	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
17. Objects falling down shaft	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

18. Breaking of cables	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
19. Overwinding	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20. Cage, skip or bucket	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
21. Other causes	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..

SURFACE ACCIDENTS

	Superintendents and Foremen		Engineers, Firemen and Hoistmen		Blacksmiths and Mechanics		Carpenters and Topmen		Electricians		Others	
	1931	1932	1931	1932	1931	1932	1931	1932	1931	1932	1931	1932
22. Haulage	..	..	..	..	..	..	..	..	..	..	..	1
23. Railway cars and locomotives	..	..	..	..	..	..	..	..	..	..	..	..
24. Run or fall of ore in or from ore bins	..	..	..	..	..	..	..	..	..	..	..	..
25. Falls of persons	..	..	..	..	..	..	..	..	..	..	..	..
26. Nails and splinters	..	..	..	..	..	..	..	..	..	..	..	..
27. Hand tools, axes, bars, etc.	..	..	..	..	..	..	..	..	..	..	..	..
28. Electricity	..	..	..	..	..	..	..	..	1	..	..	..
29. Machinery	..	..	..	..	..	..	..	..	..	..	..	1
30. Other causes	..	..	..	..	..	1	..	..	..	..	..	..
Totals	..	..	..	..	..	1	..	..	1	..	..	2

MILLS

	Superintendents and Foremen		Grinding Machinery Men and Millmen		Concentrator Men		Laborers		Carpenters Mechanics		Aerial Tram Men and Conveyor Men	
	1931	1932	1931	1932	1931	1932	1931	1932	1931	1932	1931	1932
1. Haulage system	..	..	..	..	..	..	..	..	..	..	..	..
2. Railway cars and locomotives	..	..	..	..	..	..	..	..	..	..	..	..
3. Crushers, rolls or stamps	..	..	..	..	..	..	..	..	..	..	..	..
4. Tables, jigs, etc.	..	..	..	..	..	..	..	..	..	..	..	..
5. Other machinery	..	..	..	..	..	..	..	..	..	..	..	..
6. Falls of persons	..	..	..	..	..	..	1	..	..	..	..	..
7. Suffocation in ore bins	..	..	..	..	..	..	..	..	..	..	..	..

CLASSIFICATION ACCORDING TO CAUSE AND OCCUPATION OF THE FATAL ACCIDENTS THAT OCCURRED IN THE METAL MINING AND QUARRYING INDUSTRY OF COLORADO IN THE YEARS 1931 AND 1932—Continued.

MILLS—Continued

	Superintendents and Foremen		Grinding Machinery Men and Millmen		Concentrator Men		Laborers		Carpenters Mechanics		Aerial Tram Men and Conveyor Men	
	1931	1932	1931	1932	1931	1932	1931	1932	1931	1932	1931	1932
8. Falling objects (rocks, timbers, etc.)	..	..	..	..	..	..	..	..	..	..	..	..
9. Cyanide or other poisoning	..	..	..	..	..	..	..	..	..	..	..	..
10. Scalding (steam or water)	..	..	..	..	..	..	..	..	..	..	..	..
11. Electricity	..	..	..	..	..	..	..	..	..	..	..	..
12. Hand tools, axes, bars, etc.	..	..	..	..	..	..	..	..	..	..	..	..
13. Nails, splinters, etc.	..	..	..	..	..	..	..	..	..	..	..	..
14. Flying pieces of rock from sledging or crushing	..	..	..	..	..	..	..	..	..	..	..	..
15. Other causes	..	..	..	..	..	..	..	..	..	..	..	..
Totals	..	..	..	..	..	..	1	..	..	..	..	..

SMELTERS

	Superintendents and Foremen		Laborers		Motormen and Switchmen		Feeders and Furnace Men and Charge Wheelers	
	1931	1932	1931	1932	1931	1932	1931	1932
1. Haulage system	..	..	1	..	..	..	..	..
2. Railway cars and locomotives	..	..	..	..	..	..	..	..
3. Cranes	..	..	..	..	..	..	..	..
4. Other machinery	..	..	..	..	..	..	..	..
5. Falls of persons	..	..	..	..	..	..	..	..
6. Suffocation in ore bins	..	..	..	..	..	1	..	..
7. Flying or falling objects	..	..	..	..	..	..	..	..
8. Gas (burns or asphyxiation)	..	..	..	..	..	..	..	..

9. Scalding (steam or water)	..	..	..	..	..	..	..	..
10. Electricity	..	..	..	..	..	..	..	..
11. Hand tools, axes, bars, etc.	..	..	..	..	..	..	..	..
12. Nails, splinters, etc.	..	..	..	..	..	..	..	..
13. Burns from matte, slag or molten metal (pouring or spilling)	..	..	..	..	..	..	..	..
14. Hot metal explosions	..	..	..	..	..	..	..	..
15. Other causes	..	..	..	..	..	..	..	..
Totals	..	..	1	..	..	1	..	..

QUARRIES, CLAY PITS, OIL SHALE MINES AND ROCK EXCAVATIONS

	Superintendents and Foremen		Teamsters		Drillmen		Laborers	
	1931	1932	1931	1932	1931	1932	1931	1932
1. Haulage	..	..	..	..	..	..	..	..
2. Machinery	..	..	..	..	..	..	..	..
3. Other causes	..	..	..	..	..	..	..	..
Totals	..	..	..	..	..	..	..	..

PLACERS AND DREDGES

	Miners		Laborers		Dredgemen	
	1931	1932	1931	1932	1931	1932
1. Machinery	..	..	..	..	..	..
2. Electricity	..	..	..	..	..	..
3. Other causes	..	..	..	..	..	..
Totals	..	..	..	..	..	..

ROCK EXCAVATIONS

	Superintendents and Foremen		Laborers	
	1931	1932	1931	1932
1. Falls of persons	..	..	1	..
2. Machinery	..	..	1	..
3. Other causes	..	..	..	2
Totals	..	..	2	2

LIST OF OPERATING MINES IN VARIOUS COUNTIES IN COLORADO

OPERATING MINES IN BOULDER COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Baxter (a)	Ward	Columbia Gold Mining Company	Petroleum Building, Oklahoma City, Oklahoma	Gold, Silver
Big Five Tunnel (a) (m)	Ward	Rogers McDonough	969 Detroit St., Denver	Gold, Silver (c)
Big Horn (a)	Boulder	G. H. Pomeroy	369 Arapahoe St., Boulder	Gold, Silver
Black Bird	Boulder	A. V. Dickson and W. S. Leonard	Gold Hill	Gold (c)
Blue Ribbon (a)	Boulder	Joe Lane and C. E. Barker	Boulder, Salina Star Route	Gold
California	Salina	Adelaide Herivel and J. C. Fry	2027 Pine St., Boulder	Gold, Silver
Cash (a)	Magnolia	Kenneth and Louis McKenzie	1025 Mapleton St., Boulder	Gold, Silver
Cold Spring Mine and Mill	Nederland	Wolf Tongue Mining Company	First National Bank Building, Boulder	Tungsten
Cold Springs Mine and Mill (a)	Gold Hill	Saint Joe Mining and Milling Company	Albany Hotel, Boulder	Gold (c)
Colorado Miracle (a)	Boulder	E. J. and H. A. Meyer	Boulder, Salina Star Route	Gold, Silver (c)
Columbus Lode	Gold Hill	Two Sisters Mines, Inc.	Gold Hill	Gold, Silver
Copper King	Boulder	Cobalt Gold Mining Company	615 U. S. National Bank Bldg., Denver	Gold, Silver, Cobalt, Copper (c)
Corning	Ward	Larson Mining and Milling Trust	Ward	Gold, Silver, Lead, Copper (c)
Cornucopia (a)	Boulder	Cornucopia Mining Company	Boulder, Salina Star Route	Gold, Silver (c)
Cross (a)	Nederland	Cross Gold Mining Company	1319 Spruce St., Boulder	Gold, Silver
Dime (a)	Boulder	J. B. Webb and T. R. Bice	Boulder, Salina Star Route	Gold, Silver
Emancipation Mine and Mill (a)	Boulder	Gold Egle Consolidated Mines, Inc.	1609 Pine St., Boulder	Gold (c)
Fairview Mine and Mill	Nederland	Diamond K Mining Corporation	Diamond K Ranch, Littleton	Gold, Silver, Lead (c)
Five Brothers (a)	Boulder	E. W. Hershey	Boulder, Salina Star Route	Gold, Silver
Franklin (a)	Sugar Loaf	C. H. Schaffer and Associates	Sugar Loaf	Gold (c)
Gilard (a)	Boulder	Metals Production Company	Citizens National Bank, Boulder	Gold
Glen Clover (a)	Ward	John Bosko and Associates	Louisville	Gold, Silver
Gold Dust	Boulder	Dr. B. F. Hill and Associates	2105 Spruce St., Boulder	Gold
Golden Reward	Nederland	E. C. Spray and H. C. Gilbert	Nederland	Gold, Silver (c)
Great West Group (a)	Ward	Mines Investment Company	Alma	Gold, Silver (c)
High Line Tunnel (a)	Gold Hill	Gold Hill Consolidated Mines, Ltd.	321 Midland Savings Building, Denver	Gold, Silver (c)
Ingram (a)	Boulder	Joe Griesedieck	3663 Forest Park Boulevard, St. Louis, Mo.	Gold, Silver (c)
Kekeonga	Magnolia	H. B. Crandell and Robert O. Smith	1525 Market St., Denver	Gold, Silver, Tungsten (c)
Little Giant (a)	Ward	G. L. Stanley and Associates	Boulder	Gold

Logan	Boulder	Boulderado Mining Company	2715 Colorado Avenue, Colorado Springs	Gold, Silver
Longfellow (a)	Jamestown	Oscar Dunning and Associates	Jamestown	Gold, Silver
Lucky Star Mine and Mill (a)	Gold Hill	Hosea Nelson	Laramie, Wyoming	Gold, Silver
Mack Mine (a)	Gold Hill	Thomas Lay	Longmont	Gold, Silver (c)
May Claim (m) (a)	Sugar Loaf	Walter N. Ramsey	Boulder	Gold, Silver (c)
Myrtle	Gold Hill	Dan S. Clark	Gold Hill	Gold, Silver, Lead, Zinc, Copper
Nancy Group and Mill (a)	Boulder	Metals Producing Company	Citizens National Bank, Boulder	Gold, Silver
Nettle (a)	Ward	Bert Still and J. C. Rinehart	Ward	Gold, Silver
Norway (a)	Eldora	Prosperity Gold Mines, Inc.	Greeley	Gold, Silver (c)
Pandora	Nederland	Pandora Metals Company, Inc.	227 E. & C. Bldg., Denver	Gold, Silver (c)
Plow Boy (m) (a)	Boulder	Plow Boy Mining Company	1633 California St., Denver	Gold, Silver
Potosi (m) (a)	Nederland	Potosi-Caribou Mining Company	Caribou	Gold, Silver, Lead (c)
Puzzler (a)	Ward	W. K. Miner and M. H. Ulshoffer	Jamestown, Jamestown Star Route	Gold, Silver
Richmond (a)	Boulder	A. B. Price and Associates	Boulder, Salina Star Route	Gold, Silver, Lead
Saint Joe (a)	Gold Hill	Sacks Mining Company	Albany Hotel, Boulder	Gold, Silver (c)
Shirley	Eldora	. F. Payne and Associates	4489 So. Lincoln St., Denver	Gold, Silver
Slide	Gold Hill	Standard Ore Corporation	608 E. & C. Bldg., Denver	Gold, Silver (c)
St. Louis Mine and Mill	Nederland	Richard Harvey and Associates	2900 Champa St., Denver	Gold, Silver, Lead
Tambourine (m) (a)	Boulder	Equity Reduction Company	1805 Spruce St., Boulder	Gold
Three Brothers (a)	Boulder	G. I. Gordanier	540 West Jewel St., Denver	Gold, Silver
Tungsten Mine and Mill (a)	Nederland	George W. Cowdery	Nederland	Tungsten
Twin Brothers (a)	Boulder	D. D. Weber	2215 Glenarm St., Denver	Gold, Silver
United Mines Group	Boulder	United Mines Company	Citizens National Bank Bldg., Boulder	Gold, Silver
Wano (m) (a)	Jamestown	Fred Dopp and Associates	Jamestown	Gold, Silver
Washburn (a)	Boulder	Charles C. Hagman and Axel Johnson	1010 Marine St., Boulder	Gold, Silver
Wheelman (a)	Boulder	M. C. Morrison	2445 Walnut St., Boulder	Gold, Silver (c)
Wood Mountain (m) (a)	Boulder	O. P. Pherson	1743 Mapleton St., Boulder	Gold, Silver

OPERATING MINES IN CHAFFEE COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Columbine (a)	Buena Vista	Columbine Placer Mines, Inc.	322 C. A. Johnson Bldg., Denver	Gold
Granite Tunnel (a)	Granite	H. and H. Mining Company	Granite	Gold
Matilda Tunnel	St. Elmo	Associated Metal Mines, Inc.	634 Cooper Bldg., Denver	(c)
Rockslide Tunnel (a)	St. Elmo	Associated Metal Mines, Inc.	634 Cooper Bldg., Denver	

(a) Operated for part of the year only. (c) No production reported in 1932. (m) Mill operated in connection with mine.

OPERATING MINES IN CLEAR CREEK COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Argo (m) (a)	Empire	Doctor Mining and Milling Corporation	1402 So. Broadway, Denver	Gold, Silver
Argo Tunnel (m) (a)	Idaho Springs	Chain O'Mines, Inc.	Central City	Gold, Silver, Lead, Zinc, Copper (c)
Black Eagle (m) (a)	Idaho Springs	John H. Jay	314 Franklin St., Denver	Gold, Silver, Lead, Copper
Calvin (a)	Idaho Springs	F. Griffel	575 Madison St., Denver	Gold, Silver
Central Tunnel	Idaho Springs	North American Mining Company	404 Interstate Trust Bldg., Denver	Gold, Silver
Champion (a)	Idaho Springs	C. V. Wolgamott and Associates	Idaho Springs	Gold, Silver
Clear Creek and Gilpin Group	Dumont	A. R. Specht	215 West Beach St., Long Beach, New York	Gold, Silver, Copper
Columbia (a)	Idaho Springs	Joseph A. Jackson	Idaho Springs	Gold, Silver (c)
Commonwealth Tunnel (a)	Georgetown	Commonwealth Tunnel and Transportation Company	Georgetown	Silver, Lead
Crockett (a)	Idaho Springs	Crockett Mining Company	Idaho Springs	Gold, Silver (c)
Dexter (a)	Idaho Springs	Sunday Leasing Company	Idaho Springs	Gold, Silver, Lead, Copper
Eleanor Jane and Capital (a)	Georgetown	Eleanor Jane Mining Company	109 East Kiowa St., Colorado Springs	Gold, Silver (c)
Golden Eagle (m) (a)	Empire	P. and F. Mathews and J. Hutchinson	Empire	Gold
High Five	Georgetown	Argentine Gold Mining Company	212 Denver Theatre Building, Denver	Gold, Silver, Copper (c)
Hyland (a)	Idaho Springs	A. G. Tomlin	Idaho Springs	Gold, Silver, Lead (c)
Legion (a)	Empire	Joe Garard	Empire	Gold, Silver
Lincoln	Idaho Springs	Tarheel Mining Company	Idaho Springs	Gold, Silver, Lead, Copper
Little Cub (a)	Idaho Springs	Black Bear Mines, Inc.	Idaho Springs	Gold, Silver (c)
Mattie (m)	Idaho Springs	Mattie Consolidated Mining and Milling Company	340 Continental Oil Building, Denver	Gold, Silver
Mint (m) (a)	Empire	Gold Dyke Mining Company	208 16th St., Denver	Gold, Silver
Princess of India (a)	Lawson	Lawson Mining Syndicate	Lawson	Gold, Silver, Lead
Pulaski	Silver Plume	J. K. Knox	Box 623, Bartlesville, Oklahoma	Gold, Silver
Puzzler (a)	Empire	Everett P. Snyder and Associates	Empire	Gold, Silver
Queen Elizabeth (a)	Idaho Springs	Frank J. Hayes, Mining Co.	1264 Corona St., Denver	Gold, Silver (c)
San Juan (m) (a)	Idaho Springs	Clifford and Carl Beach	Idaho Springs	Gold
Santiago (a)	Georgetown	Santiago Metals Corporation	Roggen, Colorado	Gold, Silver, Lead (c)

Silver Mountain (a)	Empire	Henry Nelson	Empire	Gold, Silver
Stevens (a)	Silver Plume	H. E. Swan and Associates	285 So. Santa Fe St., Denver	Gold, Silver, Lead (c)
Summit (a)	Idaho Springs	Roy Perry	Idaho Springs	Gold
Tailings of Old Mattie Mill (a)	Idaho Springs	J. A. Keyes and Associates	Idaho Springs	Gold
Tolland County Tunnel (a)	Idaho Springs	Albert Hall Peck	108 Van Buren Ave., West Hartford, Connecticut	Gold, Silver, Lead (c)
Twin Lode (a)	Empire	Twin Lode Mining Company, Inc.	Empire	Gold, Silver
West Gold Group (m) (a)	Idaho Springs	West Gold Mining and Milling Company	Idaho Springs	Gold, Silver
Wilson (a)	Empire	Mrs. A. C. Wilson-Zehr	Empire	Gold, Silver (c)

OPERATING MINES IN CONEJOS COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Eggleston Tunnel (a)	Placer Gulch	Charles Brown, A. S. Adams and Associates	La Veta	(c)
Hansen Tunnel (a)	Blanca	William Hansen	Blanca	(c)

OPERATING MINES IN CUSTER COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Cloverdale (a)	Hillside	Cloverdale Mines Company	Hillside	Gold (c)
Ophir Claim (a)	Westcliffe	Betty Jo Ann Mining Company	Des Moines, Iowa	Gold, Silver (c)

OPERATING MINES IN DENVER COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Jorn and Harrah Mine (m)	Valverde	Jorn and Harrah	1759 Hudson St., Denver	Gold, Silver, Tantalum and Uranium (c)

(a) Operated for part of the year only. (c) No production reported in 1932. (m) Mill operated in connection with mine.

OPERATING MINES IN DOLORES COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Geyser Group (m) (a)	Rico	Frank and Albert Stampfel	Rico	Gold, Silver (c)
Pro Patria (a)	Rico	Rico Enterprise Mining Company	Rico	Gold, Silver, Lead, Zinc (c)
Wellington	Rico	St. Louis Smelting and Refining Company	1501 International Building, St. Louis, Mo.	Silver, Lead, Zinc, Copper, Iron Pyrites (c)

OPERATING MINES IN EAGLE COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Alligator Tunnel (a)	Belden Canon	Joel Fitzgerald	Redcliff	Gold, Silver (c)
Ben Butler	Redcliff	E. D. Vankueren and Company	1448 Emerson St., Denver	Gold, Silver (c)
Champion	Gilman	Battle Mountain Exploration Company	Box 931, Leadville	Gold, Silver, Copper
Copper King and Warriors Mark Group (a)	Belden Canon	John E. Anderson and Associates	Redcliff	Gold
Eagle (m)	Gilman	Empire Zinc Company	Gilman	Gold, Silver, Lead, Zinc, Copper, Iron
Pine Martin Group (a)	Belden Canon	Howard Mize and Associates	Redcliff	Gold, Silver
Silver Queen Tunnel (a)	Battle Mountain	E. W. Arbar and Cyril Sikosek	Redcliff	Gold, Silver (c)
Tip Top Tunnel	Redcliff	Tip Top Mining Company	Redcliff	Gold, Silver, Lead

OPERATING MINES IN FREMONT COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Last Chance (a)	Parkdale	A. V. Snyder and D. C. Bernard	Parkdale	Gold (c)
Lucky Strike (a)	Parkdale	H. C. Miller and Associates	Florence	Gold (c)

OPERATING MINES IN GARFIELD COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
U. S. Vanadium Mill (a)	Rifle	U. S. Vanadium Corporation	30 East 42nd St., New York City, N. Y.	Vanadium
U. S. Vanadium Mine (a)	Rifle	U. S. Vanadium Corporation	30 East 42nd St., New York City, N. Y.	Vanadium

OPERATING MINES IN GILPIN COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Blue Diamond (m) (a)	Blackhawk	Blue Diamond Mines, Inc.	1010 University Bldg., Denver	Gold, Silver, Lead (c)
Buckhorn (m) (a)	Blackhawk	H. L. Bird and Associates	2006 Pearl St., Boulder	Gold
Chain O'Mines (m)	Central City	Chain O'Mines, Inc.	Boston Building, Denver	Gold, Silver, Lead, Copper
Cora (a)	Blackhawk	B. A. Forche and H. A. White	Blackhawk	Gold, Silver (c)
Delmonico	Central City	Delmonico Mine Operating, Corp.	Box 423, Idaho Springs	Gold, Silver (c)
Duchess (a)	Central City	Nip and Tuck Mining Company	Central City	Gold, Silver
Federal	Russell Gulch	R. I. Hughes and Jim Farris	Arvada	Gold, Silver (c)
Florence Group (a)	Rollinsville	Gamble Gulch Mining and Milling Company	Rollinsville	Gold, Silver (c)
Free Gold Tunnel Group (a)	Rollinsville	Travis Gulch Mining Company	Rollinsville	Gold, Silver (c)
Gold Key (a)	Rollinsville	Thomas Mitchell	Rollinsville	Gold, Silver (c)
Grace (a)	Rollinsville	Frank Stevenson and Associates	Milliken	Gold, Silver (c)
Independence (m)	Blackhawk	W. E. Gomer and Associates	Central City	Gold
Justice (a)	Blackhawk	Ace In The Hole Gold Mining Company	Blackhawk	Gold, Silver
Lone Star (a) (m)	Rollinsville	Charles S. Hawn and Associates	Rollinsville	Gold, Silver
Mason (a)	Russell Gulch	J. W. Oldham	1000 Temple Bldg., Kansas City, Missouri	Gold, Silver (c)
Morning Star (a)	Russell Gulch	A. I. Wilson and Associates	Idaho Springs	Gold, Silver, Lead
National (a)	Central City	Gilpin County Leasing and Development Company	Central City	Gold, Silver (c)
Newport and Providence (m)	Rollinsville	Henry Josephson and V. R. Kloer	Rollinsville	Gold, Silver
Ninety One (a)	Russell Gulch	Thomas R. Hughes and Associates	Russell Gulch	Gold, Silver
Old Town	Russell Gulch	Old Town Leasing Company	1412 Franklin St., Denver	Gold, Silver
Oneida (m) (a)	Rollinsville	Oneida Mining Company	Rollinsville	Gold, Silver, Lead, Zinc (c)
Pay Me (a)	Blackhawk	Golden Dawn Mining Company	Blackhawk	Gold, Silver (c)
Perigo (m) (a)	Rollinsville	American Mines and Smelting Company	900 Lincoln St., Boulder	Gold, Silver
Perrin (a)	Russell Gulch	B. D. Goodier	Box 158, Central City	Gold, Silver
Pittsburgh Extension (a)	Central City	Gold King Mining Company	U. S. National Bank Building, Denver	Gold (c)
Pittsburgh Group (m) (a)	Central City	J. T. Macey	711 E. & C. Bldg., Denver	Gold, Silver
Powers (a)	Central City	War Dance Mines, Inc.	Idaho Springs	Gold, Silver (c)
Rialto and East Boston (m) (a)	Central City	T. K. Hudson and Associates	631 U. S. National Bank Bldg., Denver	Gold
Russell	Russell Gulch	Lowel Griffith and Charles Thomas	Russell Gulch	Gold, Silver

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(a) Operated for part of the year only. (c) No production reported in 1932. (m) Mill operated in connection with mine.

OPERATING MINES IN GILPIN COUNTY, 1932—Continued

Name of Mine	Location	Operator	P. O. Address	Character of Product
Saratoga Group (a)	Russell Gulch	Saratoga Gold Mines, Inc.	Majestic Building, Denver	Gold, Silver
Smuggler (m) (a)	Rollinsville	New Life Mining and Milling Corporation	49 Westminster St., Providence, Rhode Island	Gold, Silver (c)
Spavia (a)	Russell Gulch	Columbus Syndicate	Idaho Springs	Gold, Silver (c)
Unit (a)	Central City	John Berglund and Associates	Central City	Gold, Silver
West Notaway (a)	Central City	Ben Neeper, George and A. B. Reed	Idaho Springs	Gold, Silver

OPERATING MINES IN GRAND COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Bonnie Belle (a)	Parshall	Charles A. Fletcher	Parshall	Gold, Silver, Lead, Copper, Zinc (c)
Elk Mountain (a)	Kremmling	Elk Mountain Copper Company	Hot Sulphur Springs	Gold, Silver, Lead, Copper, Zinc (c)
Ready Cash (a)	Empire	Jones Pass Leasing Company	2064 So. Washington St., Denver	Gold, Silver, Lead (c)

OPERATING MINES IN GUNNISON COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Carter (a)	Ohio	Carter Mines Company	1221 Sherman St., Denver	Gold, Silver, Lead
Enterprise (a)	Almont	Enterprise Syndicate	904 Equitable Bldg., Denver	Gold, Silver, Lead, Copper (c)
Gold Links (a)	Ohio	American Metals Corporation	2050 So. St. Paul St., Denver	Gold, Silver, Lead (c)
Gold Monument (m)	Ohio	Gold Monument Mining Company	303 Colorado Bldg., Denver	Gold, Silver, Lead (c)
Mammoth Group (a)	Pitkin	United States Vanadium Corporation	Rifle	Molybdenum, Tungsten, Gold, Silver, Copper, Lead (c)
Maple Leaf Group (m) (a)	Parlin	John H. Fox	Parlin	Gold
Old Lot (a)	Iola	Economy Mining and Milling Company	Iola	Gold, Silver, Lead (c)
Roosevelt (a)	Pitkin	Roosevelt Gold Mines Company	Kansas City, Mo.	Gold, Silver, Copper (c)

Stewart Group	Crested Butte	Stewart Mining Company	Crested Butte	Silver, Copper, Lead, Zinc (c)
Sunnyside and Sunset Group (a)	Ohio	R. M. Adams	1335 North Roger St., Colorado Springs	Gold, Silver (c)
Valley View Group	Powderhorn	Gunnison Gold Mines, Inc.	First Avenue Hotel, 115 Broadway, Denver	Gold, Silver, Copper, Zinc (c)

OPERATING MINES IN HINSDALE COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
George Washington Group (a)	Lake City	Roy Van Houten and Associates	Lake City	Gold, Copper (c)
Golden Wonder (a)	Lake City	San Juan Gold Mines Corporation	50 Broad St., New York, N. Y.	Gold, Silver, Copper

OPERATING MINES IN JACKSON COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Gold Cup (a)	Rand	Fred Jorden and Associates	Rand	Gold, Silver (c)
Rabbit Ear Peak (a)	Walden	William H. Grant and Associates	Boulder	Manganese (c)

OPERATING MINES IN LAKE COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Anchor Tunnel (a)	Twin Lakes	Dr. Hiatt and Company	Box 922, Leadville	Gold, Silver, Lead, Zinc, Copper (c)
Antelope Tunnel (a)	Leadville	Antelope Tunnel and Mining Company	Leadville	(c)
Blanche Shaft (a)	Leadville	John Cortellini and Associates	Leadville	Gold, Silver, Lead (c)
Cleveland Tunnel	Leadville	William J. Forbes and Associates	121 West 7th St., Leadville	Gold, Silver
Climax Molybdenum	Climax	Climax Molybdenum Company	Climax	Molybdenum
Dolly B.	Leadville	John Goodbarn and Company	Leadville	Gold, Silver, Lead
Dolly B Shaft (a)	Leadville	Ivor Johnson and Associates	Leadville	(c)
Eclipse Tunnel	Leadville	C. A. Edwards, Joyce Brothers and Associates	Leadville	(c)

(a) Operated for part of the year only. (c) No production reported in 1932. (m) Mill operated in connection with mine.

OPERATING MINES IN LAKE COUNTY, 1932—Continued

Name of Mine	Location	Operator	P. O. Address	Character of Product
Green Shaft (a)	Leadville	Martin R. Green and Associates	Leadville	Gold, Silver, Lead
Ground Hog Tunnel (a)	Twin Lakes	Leo Hodges and Associates	Twin Lakes	Gold (c)
Hattie Jane (a)	Granite	Marquette Mining Company	406 Mining Exchange Bldg., Denver	Gold
Highland Mary (a)	Leadville	Joseph Boland and Associates	Leadville	(c)
Resurrection	Leadville	Zenda Leadville Gold Mining Company	Box 922, Leadville	Gold, Silver, Lead, Zinc, Copper (c)
Roboff (a)	Twin Lakes	A. T. Stewart, Eugene Crawford and Company	Pueblo	Gold
Saint Anne Shaft (a)	Leadville	W. J. Davis and Associates	228 East 9th St., Leadville	(c)
Scott Tunnel (a)	Climax	E. W. Sullivan and Company	Goodland, Kansas	(c)
Smith Tunnel (a)	Leadville	Paul Smith and Associates	Box 917, Leadville	Gold, Silver
St. Louis Tunnel (a)	Leadville	Clyde Balkwill, Fred McNair and Associates	400 West 9th St., Leadville	Gold, Lead
Sunnyside Tunnel	Twin Lakes	Nelson Brothers and Galloway	Twin Lakes	Gold (c)
Venir Shaft	Leadville	Venir Lease	Leadville	Gold, Silver
Yak Tunnel (a)	California Gulch	Yak Mine Company	Leadville	Gold, Silver, Lead, Copper, Zinc, Iron (c)

OPERATING MINES IN LA PLATA COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Bessie G (a)	Durango	Durango Chamber of Commerce	Durango	Gold
Gold King (m)	La Plata	La Plata Mines Company	526 First Natl. Bank Bldg., Denver	Gold, Silver, Lead
Honey Dew Group (a)	La Plata	Honey Dew Mines Synd.	La Plata	Gold, Silver, Lead, (c)
Jumbo Group (a)	Hesperus	Thomas Crowdis	Durango	Gold, Silver (c)
May Day	Hesperus	Howser Leasing Company	Hesperus	Gold, Silver
McCartney Group (a)	Durango	Allen F. Wright	Durango	Gold, Silver (c)
Monarch (m) (a)	Hesperus	Monarch Gold Mining Company	Hesperus	Gold
Mountain Lily	La Plata	Mariposa Mines, Inc.	Walsenburg	Gold, Silver
Neglected (a)	Durango	J. C. Ort	Los Angeles, Calif.	Gold, Silver (c)
Texas Chief Group (m)	Durango	Texas Chief Mining Company	Durango	Gold, Silver

OPERATING MINES IN LARIMER COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Carter (a)	Masonville	Golden Age Mining Company	1202 River St., Canon City	Gold, Silver (c)
Cash	Rustic	Cash Gold Mining Company	2305 Gaylord St., Denver	Gold, Silver, Lead, Copper (c)
Colorado (a)	Manhattan	Colonial Investment Company	Postmaster, Fort Collins	Gold, Silver (c)
Dixie Group	Logcabin	Dixie Mining Company	608 So. Meldrum St., Fort Collins	Gold (c)
Goldora (a)	Fort Collins	Goldora Mines	121 No. Sherwood St., Fort Collins	Gold (c)
Lone Pine (a)	Masonville	Mrs. Anna Krutsinger	Masonville	Gold (c)
Rockwell Group (a)	Manhattan	S. A. and W. T. Pendergast	Logcabin	Gold, Silver, Copper (c)

OPERATING MINES IN OURAY COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
American Nettie	Ouray	Mutual Gold Mines	928 University Bldg., Denver	Gold, Silver
American Nettie Mill Tailings Dump (a)	Ouray	Utah Mining and Milling Company	Ouray	Gold, Silver
Atlas (a)	Ouray	John Donald	Ouray	Gold, Silver, Lead (c)
Banner American (a)	Ouray	Banner American Mining Company	Ouray	Gold, Silver, Lead
Barstow (a)	Ouray	Barstow Mines, Inc.	1422 17th St., Denver	Gold, Silver, Lead, Zinc, Copper (c)
Calliope (a)	Ouray	B. P. Bailey	Box 752, Austin, Tex.	Gold, Silver, Lead
Camp Bird (m)	Ouray	King Lease, Inc.	Norwood	Gold, Silver, Lead, Copper
Governor Group	Ouray	J. W. Sowers	Ridgway	Gold, Silver
Jumbo (a)	Ouray	Banner American Mining Company	Ouray	Silver, Lead, Zinc
Nevada (a)	Ouray	Paul McClure and Clinton Knox	Ouray	Gold
Pony Express (m)	Ouray	Banner American Mining Company	Ouray	Gold, Silver, Lead
Revenue Tunnel Mill Tailings (a)	Ouray	Walter B. Rogers	Ouray	Gold, Silver
Trust Ruby Group (a)	Ouray	Nick Flor and Associates	Ouray	Gold, Silver
Valkyrie Group (a)	Ouray	Julius Grabow	Denver	Gold, Silver, Lead (c)
Wanakah (a)	Ouray	American Lease, Inc.	Golden	Gold, Silver, Lead
Woodstock Group	Ouray	Woodstock Mines Company	Ouray	Gold, Silver (c)

(a) Operated for part of the year only. (c) No production reported in 1932. (m) Mill operated in connection with mine.

OPERATING MINES IN PARK COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
American	Alma	American Mining Company	504 Brown Palace Hotel, Denver	Gold, Silver
Butte	Alma	London Butte Gold Mining Company	Leadville	Gold, Silver (c)
Dempsey Group (a)	Alma	London Option Company	1735 Stout St., Denver	Gold, Silver (c)
Discovery No. 1 (a)	Alma	A. J. Sandusky	Alma	Gold, Silver, Lead (c)
Excelsior (a)	Alma	Bald Eagle Mining Company	2420 17th St., Denver	Gold, Silver
Funston and Lucky Strike Group (a)	Alma	Charles Price	Alma	Gold, Silver, Lead (c)
Hock Hocking	Alma	M. B. Burke	301 Humboldt St., Denver	Gold, Silver
London	Alma	W. R. Jewett	1201 Arden Road, Pasadena, Calif.	Gold, Silver
Magnolia (m)	Alma	Magnolia Mines Company	2420 17th St., Denver	Gold
Missouri (a)	Webster	Canabsa Mining Company	1675 Steele St., Denver	Gold, Silver, Lead, Bismuth
North London (m)	Alma	Fairplay Gold Mining Company	Fairplay	Gold, Silver
Oliver Twist Tunnel	Alma	London Mountain Gold Mining Company	604-610 Denham Bldg., Denver	Gold, Silver (c)
Ophir (a)	Alma	Mosquito Gold Mines, Inc.	301 Humboldt St., Denver	Gold, Silver (c)
Orphan Boy (a)	Alma	A. E. Moynahan	1401 E St., Golden	Gold, Silver, Lead
Pactolas (a)	Alma	M. Z. McGlochlin	Alma	Gold, Silver (c)
Paris (m) (a)	Alma	Alma Gold Corporation	706 First National Bank Bldg., Denver	Gold, Silver (c)
Philips (a)	Alma	J. A. Keyes and Bob Bartlett	Buena Vista	Gold, Silver
Sweet Home (a)	Alma	E. C. Spray	1233 15th St., Denver	Gold, Silver, Lead, Copper, Zinc (c)
West London (a)	Alma	West London Mines Company	528 First National Bank Bldg., Denver	Gold, Silver

OPERATING MINES IN PITKIN COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Hope Tunnel (a)	Aspen	Famous Leasing Company	Aspen	Silver, Lead (c)
Independence Dump and Mill Tailings (a)	Independence Pass	Charles Jordan	Jerome Hotel, Aspen	Gold

Independence Group (a)	Independence Pass	D. P. Rohlphing and Associates	Aspen	Gold, Silver
Midnight (m)	Aspen	Midnight Mining Company	Aspen	Silver, Lead, Zinc
One Star No. 1 (a)	Independence Pass	Lewis Popish and Associates	Aspen	Silver (c)
Park Ridge (a)	Redstone	Park Ridge Mining and Milling Company	Redstone	Gold (c)

OPERATING MINES IN RIO GRANDE COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Microcosm Tunnel (a)	Stunner	H. H. Winchell and Associates	421 Hurst Ave., Monte Vista	(c)
Miser Tunnel (a)	Jasper	Marion Mining Company	908 Equitable Bldg., Denver	Gold, Silver, Lead, Copper, Zinc, Iron

OPERATING MINES IN ROUTT COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Copper King (m) (a)	Copper Spur	Cole Mining and Milling Company	Copper Spur	Gold, Silver, Lead, Copper (c)
Royal Flush (m) (a)	Columbine	Hahns Peak Gold Mining and Milling Company	Columbine	Gold, Silver, Lead, Zinc, Copper (c)

OPERATING MINES IN SAGUACHE COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Continental	Iola	Owen O'Fallen, C. E. Lyman and B. M. Lyman	Gunnison	Gold, Silver
Golden Hope Group (m) (a)	Iola	Joe D. Henry, Sim B. Moore and John Mangan	Iola	Gold, Silver (c)

(a) Operated for part of the year only. (c) No production reported in 1932. (m) Mill operated in connection with mine

OPERATING MINES IN SAN JUAN COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Gold King (a)	Silverton	Gold King Mines Corporation	300 Central Savings Bank Bldg., Denver	Gold, Silver, Lead (c)
Gold King Mill Dump (a)	Silverton	Forest D. Goody	Silverton	Gold (c)
Kansas City Group (a)	Silverton	Joe Ficco	Silverton	Gold, Silver, Lead, Copper (c)
Lead Carbonate (m)	Silverton	El Banco Mines	Merrill Trust Company, Bangor, Me.	Gold, Silver, Lead, Zinc, Copper
Little Nation (a)	Howardsville	Royal Charter Mining and Milling	22 McGee St., Kansas City, Mo.	Gold, Silver, Lead, Copper, Zinc (c)
Lucky Jack (a)	Eureka	Lucky Jack Gold Mining Company	Delta	Gold, Silver, Lead (c)
North Star	Silverton	North Star-Sultan Mining Co.	430 U. S. National Bank Bldg., Denver	Gold, Silver, Lead, Copper, Zinc
Parker Group (a)	Silverton	H. J. Fogle and Associates	Silverton	Gold, Silver, Lead, Copper (c)
Pride of the West (m) (a)	Howardsville	Alfred W. Harrison	Silverton	Gold, Silver, Copper, Lead, Zinc (c)
San Juan Queen	Eureka	Joe Seletto and Louis Ghina	Silverton	Gold, Silver
Shenandoah-Dives (m)	Silverton	Shenandoah-Dives Mining Company	Silverton	Gold, Silver, Lead, Copper

OPERATING MINES IN SAN MIGUEL COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Bootjack (m) (a)	Ophir	Ouray Concentrating Co.	2541 Washtenaw Ave., Chicago, Ill.	Gold, Silver, Lead, Zinc
Cimarron (m) (a)	Telluride	Cimarron Mining Corporation	52 Wall St., New York, N. Y.	Gold, Silver, Lead, Zinc, Copper (c)
Crown Point (a)	Ophir	Crown Point Mining Company	Ophir	Gold, Silver, Lead (c)
Fairview Group (a)	Telluride	C. V. Nordgren	Telluride	Gold, Silver, Lead
Hattie Group	Ophir	C. L. Neilson and Associates	Ophir	Gold, Silver, Lead
Liberty Bell (a)	Telluride	George E. Hicks	Telluride	Gold
Liberty Bell Dump (m) (a)	Telluride	Frank Fidel and Associates	Telluride	Gold
Nellie and Laura (m)	Telluride	Paul Nardin	Telluride	Gold, Silver
New Dominion Group (a)	Ophir	James Knowles and Fred Aiken	Ophir	Gold, Silver, Lead, Zinc (c)

Silver Tip Group (a)	Ophir	H. A. and W. F. Pollman	Telluride	Gold, Silver, Lead, Copper
Smuggler Union (m)	Telluride	Telluride Mining and Milling Company	Telluride	Gold, Silver, Lead
Pennsylvania Tunnel Level (Smuggler Union)	Telluride	Telluride Mining and Milling Company	Telluride	Gold, Silver, Lead

OPERATING MINES IN SUMMIT COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Boston (a)	Kokomo	Howard Kane and Associates	Kokomo	Gold, Silver, Lead
Dunkin (a)	Breckenridge	Dunkin Gold Group, Inc.	1343 High St., Denver	Gold, Silver, Lead
Frisco	Frisco	W. E. Burchfield	304 Clarkson St., Denver	Gold (c)
Jumbo (a)	Breckenridge	Jumbo Properties, Inc.	708 Colorado Bldg., Denver	Gold, Silver, Lead
Ling (a)	Breckenridge	J. C. Hale and Associates	Fort Worth, Tex.	Gold, Silver (c)
McDowell (a)	Breckenridge	McDowell Mines, Inc.	746 Equitable Bldg., Denver	Gold, Silver
Pacific	Breckenridge	G. S. Thomas	Alma	Gold, Silver
Pilot	Montezuma	George Robinson	Breckenridge	Gold, Silver, Lead (c)
Silver King	Montezuma	J. C. Ritchey and Associates	Montezuma	Gold, Silver, Lead
Tiger (m) (a)	Tiger	John A. Traylor	Tiger	Gold, Silver
War Eagle (a)	Montezuma	A. E. Mansfield and Associates	616 University Bldg., Denver	Gold, Silver, Lead (c)

OPERATING MINES IN TELLER COUNTY, 1932

Name of Mine	Location	Operator	P. O. Address	Character of Product
Abe Lincoln	Poverty Gulch	Henry Martin	Cripple Creek	Gold
Acacia	Cripple Creek	A. G. Monroe and A. C. Austin	Cripple Creek	Gold
Acacia and Free Coinage (a)	Independence	George Howard and John Barron	Victor	Gold
Ajax Dump	Victor	L. A. H. M., Inc.	Cripple Creek	Gold
Ajax Mine	Victor	Granite Gold Mining Company	Mining Exchange Bldg., Colorado Springs	Gold
Block 8, School Section	Cripple Creek	Kyner Leasing Company	Cripple Creek	Gold
Bray Lease on Free Coinage	Cripple Creek	C. S. Bray and Associates	Cripple Creek	Gold
Cameron Townsite	Cripple Creek	Cameron Gold Mines, Inc.	5409 Montview Blvd., Denver	Gold
Chatt Group (a)	Cripple Creek	Geophysical Mining Company	Cripple Creek	Gold (c)
Colorado City	Victor	Colorado Gold, Inc.	Cripple Creek	Gold
Commonwealth (a)	Cripple Creek	Commonwealth Gold, Inc.	Victor	Gold
Crawford Shaft (a)	Cripple Creek	Phillip Metzler	Box 146, Cripple Creek	Gold
Cresson	Cripple Creek	Cresson Consolidated Gold Mining Company	Box 86, Colorado Springs	Gold
Davenport Shaft of Doctor Jack Pot Mine	Cripple Creek	E. W. Schrock, D. G. Dissman and J. S. Gately and Co.	Cripple Creek	Gold

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(a) Operated for part of the year only. (c) No production reported in 1932. (m) Mill operated in connection with mine

OPERATING MINES IN TELLER COUNTY, 1932—Continued

Name of Mine	Location	Operator	P. O. Address	Character of Product
Deadwood (a)	Victor	Henderson and Stumph	Cripple Creek	Gold
Ellis (a)	Cripple Creek	Ellis M. and M. Company	La Junta	Gold (c)
Ful-Value (a)	Raven Hill	Ful-Value Gold Mining Company	1421 East Asbury St., Denver	Gold (c)
Gold Bond (a)	Cripple Creek	Savach and Cordner	434 Cooper Bldg., Denver	Gold
Isabella	Cripple Creek	United Gold Mines Company	Box 86, Colorado Springs	Gold
Jerry Johnson	Cripple Creek	Jerry Johnson Gold, Inc.	Cripple Creek	Gold
Little May	Victor	Cripple Creek Coalition	5409 Montview Blvd., Denver	Gold
Los Angeles (a)	Victor	Colorado Gold, Inc.	Cripple Creek	Gold
Margaret B. (a)	Cripple Creek	Charles Vanatta and Richard Tremayne	Cripple Creek	Gold (c)
Mary McKinney (Lloyd Lease)	Cripple Creek	Sumner H. Lloyd	8 Mesa Place, Colorado Springs	Gold
Mary McKinney (Owens Lease)	Cripple Creek	Howard Owens	Cripple Creek	Gold
Moose	Cripple Creek	Moose Mine Operations, Inc.	Cripple Creek	Gold
Neff Bros. Lease on Pueblo Claim (a)	Bull Hill	Neff Brothers and Company	Box 74, Cripple Creek	Gold
Night Hawk	Cripple Creek	Black Belle Mining Company	221 Central Savings Bank Bldg., Denver	Gold
North Star and Holliston Group	Victor	Chillson Mining and Leasing Company	Victor	Gold (c)
Oak Claim	Cripple Creek	Odessa Gold Mining Company	1115 Logan St., Denver	Gold (c)
Patti Rosa	Cripple Creek	United Gold Mines Company	Box 86, Colorado Springs	Gold
Pinnacle	Cripple Creek	Mexican Gold and Silver Mining Company	1109 Alexander Bldg., San Francisco, Calif.	Gold
Portland	Victor	Portland Gold Mining Company	Burns Bldg., Colorado Springs	Gold
Rose Nicol	Cripple Creek	United Gold Mines Company	Box 86, Colorado Springs	Gold
Ruby (a)	Victor	Reiter-Marbut Leasing Company	Cripple Creek	Gold
Shurtloff Dump	Victor	Dawn Leasing Company	Victor	Gold
Soloman	Cripple Creek	United Gold Mines Company	Box 86, Colorado Springs	Gold
South Burns Shaft (a)	Bull Hill	Gold Dollar Gold Mining Company	617 Symes Bldg., Denver	Gold
Stratton Cripple Creek Mining and Development Co.	Cripple Creek	Stratton Cripple Creek M. and D. Company	Independence Bldg., Colorado Springs	Gold
Strong	Victor	Page and Vigen	Victor	Gold
Theresa Shaft	Victor	United Gold Mines Company	Box 86, Colorado Springs	Gold
Victor (a)	Victor	Pitt Leasing Company	410 California Bldg., Denver	Gold
Vindicator	Victor	United Gold Mines Company	Box 86, Colorado Springs	Gold

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OPERATING QUARRIES AND CLAY PITS, 1932

Town	County	Name	Product	Operator	Address
Boulder	Boulder	Jacobsen	Building and Crushed Stone	Nels I. Jacobsen	1155 Portland St., Boulder
Lyons	Boulder	Lyons Red Granite	Granite	John Rabesco	653 Perry St., Denver
Lyons	Boulder	St. Vrain Red Sandstone	Sandstone	J. C. Brodie	609 Interstate Trust Bldg., Denver
Westcliffe	Custer	Sparling Ranch	Vermiculite	Non-Metallics, Inc.	Canon City
Castle Rock	Douglas	Castle Rock City	Plastic Clay	A. C. Nipko	Castle Rock
Littleton	Douglas	Helmer	Limestone, Fire Clay, Red Clay, Silica Sand	T. L. Helmer	Box 94, Littleton
Castle Rock	Douglas	Johnson Clay	Plastic Clay	H. G. Johnson	Castle Rock
Colo. Springs	El Paso	Breed Lennox	Limestone	Holly Sugar Corporation	115 North 23rd St., Colorado Springs
Colo. Springs	El Paso	Coleman Granite Plant	Granite, Grinding	V. D. Coleman Granite Co.	218 West Cimarron St., Colorado Springs
Manitou	El Paso	Western Lime Rock	Limestone	Western Lime Company	551 Equitable Bldg., Denver
Texas Creek	Fremont	Colorado Pink Granite	Granite	V. D. Coleman Granite Co.	218 West Cimarron St., Colorado Springs
Portland	Fremont	Colorado Portland	Limestone, Shale	Colorado Portland Cement Company	Denver National Bldg., Denver
Canon City	Fremont	Deer Hill	Fire Clay	Diamond Fire Brick Co.	60 East 42nd St., New York, N. Y.
Canon City	Fremont	Dolomite	Dolomite	Roy Frankenbery and J. R. Thomas, Jr.	Canon City
English Siding	Fremont	English	Marble	U. S. Marble Company	404 Temple Court Bldg., Denver
Canon City	Fremont	Flint	Fire Clay	Diamond Fire Brick Co.	60 East 42nd St., New York, N. Y.
Coaldale	Fremont	Gypsum	Gypsum	T. A. Gilray	Coaldale
Canon City	Fremont	Gypsum Quarry on School Land	Gypsum	Colorado Portland Cement Company	Denver National Bldg., Denver
Canon City	Fremont	Jewett	Fire Clay	Jewett Brick Company	Box 505, Canon City
Wellsville	Fremont	Rogers	Limestone	George R. Rogers	Salida
Texas Creek	Fremont	Rose Pink Granite	Granite	Salida Granite Corporation	Salida
Canon City	Fremont	Shaw Park	Silica Rock	Diamond Fire Brick Co.	60 East 42nd St., New York, N. Y.
Canon City	Fremont	Shipley	Feldspar, Mica	Ralph Magnuson	1333 West Maple Ave., Denver
Calcite	Fremont	Spring Canon	Limestone	Frank H. Norberg	979 Madison St., Denver
Canon City	Fremont	Stanko and Halstead	Feldspar, Mica	Ralph H. Magnuson	El Rio Hotel, Canon City

OPERATING QUARRIES AND CLAY PITS, 1932—Continued

Town	County	Name	Product	Operator	Address
Phantom Canon	Fremont	Twin Mountain	Marble, Travertine	U. S. Marble Company	404 Temple Court Bldg., Denver
Canon City	Fremont	Upper Beaver Creek	Flint Rock, Fire Clay	Jewett Brick Company	Box 505, Canon City
Wellsville	Fremont	Wallen	Limestone	Frank H. Norberg	979 Madison St., Denver
Salida	Fremont	Wellsville Travertine	Travertine	Colorado Travertine Company	724 Cooper Bldg., Denver
Canon City	Fremont	Zingheim Mica	Beryl, Feldspar, Mica	E. E. Zingheim	Box 190, Orchard Ave., Canon City
Marble	Gunnison	Yule Marble	Marble	Yule Colorado Marble Company	Proctor, Vermont
Golden	Jefferson	Binder Clay	Clay	Denver Pressed Brick Company	West 16th Ave. and Clay St., Denver
Golden	Jefferson	Coors Clay Mine and Plant	Plastic Clay	Coors Porcelain	Golden, Colo.
Golden	Jefferson	Crucible Clay	Fire Clay	Colorado Crucible Clay Company	31st and Blake Sts., Denver
Golden	Jefferson	Golden Clay Mines and Plant	Plastic and Fire Clay	Golden Fire Brick Co.	Golden
Golden	Jefferson	Johnson Clay	Plastic Clay	Frank Hawn	Golden
Golden	Jefferson	Lindsay Clay	Fire Clay	Denver Fire Clay Co.	31st and Blake Sts., Denver
Golden	Jefferson	Fire Clay	Fire Clay	Denver Sewer Pipe and Clay Company	Curtis and Broadway, Denver
Buffalo	Jefferson	Oregon No. 2	Feldspar	Colorado Clay Mining Company	900 Lincoln St., Boulder
Golden	Jefferson	No. 10 Open Cut	Clay	Denver Sewer Pipe and Clay Company	Curtis and Broadway, Denver
Golden	Jefferson	Northwestern Clay	Clay	Northwestern Terra Cotta Company	1st and Umatilla Sts., Denver
Golden	Jefferson	Rockwell	Plastic Clay	Geo. W. Parfet, Sr.	Golden
Golden	Jefferson	Ruby	Plastic Clay	Geo. W. Parfet, Jr.	Golden
Golden	Jefferson	Wilson	Clay	Denver Sewer Pipe and Clay Company	Curtis and Broadway, Denver
Laporte	Larimer	Boettcher Cement Quarry and Mill	Limestone and Shale	Colorado Portland Cement Company	Denver National Bldg., Denver
Laporte	Larimer	Clark	Limestone	Clark Quarries, Inc.	Box 503, Fort Collins
Laporte	Larimer	Gypsum	Gypsum	S. H. Roberts	Laporte
Bellvue	Larimer	Josefson	Limestone	Josefson Brothers	Bellvue
Loveland	Larimer	U. S. Gypsum	Gypsum Rock	United States Gypsum Company	300 W. Adams St., Chicago, Ill.
Trinidad	Las Animas	Trinidad Brick and Tile Co.	Shale	Trinidad Brick and Tile Company	Trinidad

Creede	Mineral	Ultimate No. 1	Bleaching Clay	Peerless Mineral and Clay Company	1st National Bank Bldg., Pueblo
La Junta	Otero	La Junta Shale and Brick	Shale	Clay Products, Inc.	La Junta
Pueblo	Pueblo	Standard Fire Brick Plant	Sewer Pipe, Silica and Fire Brick	Standard Fire Brick Co.	Box 654, Pueblo
Pueblo	Pueblo	Stone City Clay Mines and Kilns	Fire Clay	Pueblo Clay Products Co.	308 West 16th St., Pueblo
Pueblo	Pueblo	Summit	Tile, Building Brick	Summit Pressed Brick and Tile Co.	Box 534, Pueblo
Stone City	Pueblo	Turkey Creek Stone	Sandstone	Pueblo Quarries, Inc.	306 Central Block, Pueblo

OPERATING MILLS AND SMELTERS, 1932

Character of Plant	Town	County	Operator	Address
Arsenic and Cadmium Refinery	Denver	Adams and Denver	American Smelting and Refining Co.	120 Broadway, New York City, N. Y.
Boulder Ore Sampler	Boulder	Boulder	Boulder Ore Sampling Co.	Boulder
Black Swan Custom Mill	Boulder	Boulder	Howard P. Tweed	Arnett Hotel, Boulder
Polar Star Custom Mill	Blackhawk	Gilpin	Loney and Reynolds	Blackhawk
Cyanidation and Flotation	Colorado Springs	El Paso	Golden Cycle Corporation	Golden Cycle Bldg., Colorado Springs
Zinc Oxide	Canon City	Fremont	Empire Zinc Company	Canon City
Cyanidation	Leadville	Lake	Cramer and Company	Leadville
D. and D. Mill	Leadville	Lake	D. and D. Mining and Milling Company	Leadville
Lead Smelter	Leadville	Lake	American Smelting and Refining Company	120 Broadway, New York City, N. Y.
Mica Grinding	Pueblo	Pueblo	General Mica, Inc.	211 1st National Bank Bldg., Pueblo
Clay Crushing and Grinding	Pueblo	Pueblo	Peerless Clay and Mineral Company	211 1st National Bank Bldg., Pueblo
Mill Tailings	Telluride	San Miguel	Gold Run Mining and Milling Company	604 and 1203 1st National Bank Bldg., Denver.

OPERATING PLACERS AND DREDGES, 1932

Name	Town	County	Operator	Address
Colby	Boulder	Boulder	More Minerals M. and M. Corporation	Wallstreet, Star Route, Boulder
Hughes Placer	Nederland	Boulder	Harry Hughes	Nederland
Albany	Idaho Springs	Clear Creek	Cole Mining Co.	Idaho Springs
Gold Pit	Idaho Springs	Clear Creek	H. E. Winser	Idaho Springs
Maude Monroe	Idaho Springs	Clear Creek	Lucky Kid Mining Co.	Idaho Springs
Theobold Placer	Idaho Springs	Clear Creek	President Gold Mining Co.	502 Midland Savings, Denver
Lucky Charles	Blackhawk	Gilpin	Lucky Charles M. and M. Company	2449 So. Acoma St., Denver
Lump Gulch	Rollinsville	Gilpin	B. P. P. Mining Co.	Rollinsville
Pactolus	Pine Cliff	Gilpin	Prommel Mining Co.	Box 75, Pine Cliff
Rollins	Rollinsville	Gilpin	Mrs. Lucy Harrington	707 So. Downing St., Denver
Bedford	Franktown	Douglas	Bedford Mining Co.	Franktown
Roscoe	Golden	Jefferson	Golden Placer Trust	400 16th St., Denver
Arkansas Valley	California Gulch	Lake	Arkansas Valley Mining	Salida
Buckeye Gulch	Leadville	Lake	Hap Lytle and Associates	Glenwood Springs
Camloops	Twin Lakes	Lake	Camloops Placer Mining Company	Granite
O'Fay Brothers	California Gulch	Lake	O'Fay Brothers	Leadville
Callahan Placer	Lay	Moffat	A. W. Hooper and Ezra Munroe	Lay
Jack Rabbit Placer	Lay	Moffat	Dr. Lee Webb	Vernal, Utah
Selig Placer	Craig	Moffat	Everett Winters and Company	Craig
Timberlake Placer	Craig	Moffat	James Gooldy	Baggs, Wyoming
Zimmerman Placer	Craig	Moffat	A. H. Buck	1046 Vine St., Denver
Fortune Tarryall Placer	Como	Park	W. E. Burke	Como
Gold Ledge Placer	Placerville	San Miguel	Windsor Mining Company	1020 University Bldg., Denver
Bemrose Placer	Breckenridge	Summit	Buffalo Exploration and Mining Company	Buffalo, N. Y.
Blue River Dredge	Breckenridge	Summit	Continental Dredging Company	310 Engineer's Bldg., Denver
Emelie Placer	Breckenridge	Summit	G. W. Hale and Associates	Breckenridge
Eureka Placer	Kokomo	Summit	McNulty Leasing Company	Kokomo
Nigger Gulch Placer	Breckenridge	Summit	Reed Roberts and Associates	Breckenridge
Washington Placer	Breckenridge	Summit	Reiter and Marbut Leasing Company	Breckenridge
Wonderful Placer	Breckenridge	Summit	W. T. Middleton and Associates	5 E. Brookside, Colorado Springs
You Be Dam Placer	Breckenridge	Summit	Godman Lumber Company	Denham Bldg., Denver

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